BEST PRACTICE PROGRAMME IN PROMOTING ACADEMIC INTEGRITY

A COMPENDIUM OF BEST PRACTICES

Volume 1
2021-2022

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

BEST PRACTICE PROGRAMME IN PROMOTING ACADEMIC INTEGRITY

A COMPENDIUM OF BEST PRACTICES

Author:
Tricia Bertram Gallant

Council of Europe

Contents

EXECUTIVE SUMMARY

This compendium provides a thorough review of the background, process, and results of the Council of Europe's Best Practices Programme in Promoting Academic Integrity (CoE-BPP) launched in 2021. The aim of the Programme is to identify the best practices that European higher education institutions are implementing to combat academic corruption. The compendium serves to share these best practices to encourage and inspire all European higher education institutions to work towards building cultures of academic integrity through improving teaching and learning, ensuring viable and relevant policies for guiding integrity behaviours and procedures for responding to integrity breaches, enhancing communications about academic integrity, implementing sound governance structures for supporting academic integrity, and training community members in how to choose integrity over misconduct. Given that the 2021 Call for Best Practices was issued during the global COVID-19 pandemic, there was a particular interest in identifying best practices implemented to tackle the specific challenges that remote teaching, learning and research presented for academic integrity.

The CoE-BPP call resulted in 46 applications from 43 European higher education institutions in 24 countries. These 46 applications were reviewed by an evaluation panel according to the following criteria: efficiency, effectiveness, replicability, sustainability, stakeholder involvement, and values-based. This review narrowed the selection down to 10 applicants, who were then interviewed about their practices. Ultimately, one practice was selected by the CoE-BPP as the best practice and 9 others were commended.

The presentation of these 10 practices, as well as 12 other relevant practices, provide concrete ideas on the steps that can be taken, small to large, to combat academic corruption in higher education. While each practice takes on a unique flavour of the local culture and institutional context, the best practice – the Dilemma Game App by Erasmus University Rotterdam – and the 9 commended practices were selected because they can be adapted for use in any institution. The hope is that the practices in this compendium highlight for readers that academic corruption can be addressed directly and intentionally, thereby providing an impetus for other institutions to implement similar or other academic integrity practices.

The practices in this compendium present innovative training solutions, like the Dilemma Game App, VIRT2UE, and Mind the GAP. This compendium also highlights teaching and learning changes made as an adaptation to the unique challenges created for academic integrity as a result of the remote educational and research environments, such as those made by the University of Oslo, Technical University of Moldova, and the University of National and World Economy. Readers interested in learning more about best practices in policy and procedures can benefit from the efforts of Lesya Ukrainka Volyn National University and the University of Montenegro to create cultures of academic integrity. And the Embassy of Good Science is highlighted as a best communication practice, notable for their open-sourced online platform to develop and share research integrity standards.

Overall, the practices highlighted in this compendium offer five lessons for other higher education institutions interested in combating academic corruption by enhancing academic integrity. First, best practices are innovative in adapting to changing contexts, acknowledging that academic integrity is strongly influenced by the surrounding environment. Second, best practices seek to teach academic integrity as a skillset, rather than (erroneously) assuming that integrity is a quality that people either have or do not have. Third, best practices are built on values, not behaviours or structures; values are evergreen and serve as a foundation for change. Fourth, successful practices engage many stakeholders across the entire campus community, not just in the development but in the implementation of the practice. And finally, corruption cannot be tackled in a day; the practices highlighted in this compendium showcase that continued efforts, one step at a time, may be key to building cultures of integrity that can withstand the societal forces that invite corruption.

INTRODUCTION: WHY ACADEMIC INTEGRITY MATTERS

I t is no secret after two years of Emergency Remote Teaching that academic misconduct or cheating is a growing concern within higher education. News headlines announcing the state of cheating proliferated between 2020-2022 in all geographic regions around the world. Conversations within the higher education sector about the situation were also not unusual, with the state of cheating even encouraging some quality assurance agencies to work with politicians to pass legislation in response[1] and agencies to ramp up their work fighting contract cheating[2].

Even back in 2018, Newton predicted that as many as 31 million students in the world were engaging in contract cheating, that is, arranging for another to complete their assessments (in part or total) for them[3]. Another study by Janke et al (2021) found that 83% of German students surveyed (n=1608) admitted they engaged in multiple forms of cheating during one remote term (Spring 2020) alone[4].

Misconduct in higher education is not relegated to the actions of students who seek unearned grades. It also occurs within the other main activity that universities undertake - the conduct of research. It is estimated that 2.9% of surveyed researchers admit to committing FFP (falsification, fabrication, plagiarism) while 12.5% admit to engaging in questionable research practices[5]. In addition, 15.5% of researchers report that they have seen a colleague commit research misconduct, while 39.7% are aware that colleagues use questionable research practices[6].

When academic misconduct, whether committed by students or researchers, is left unaddressed and allowed to proliferate and become normalized, it poses a threat to the quality, integrity and legitimacy of the global higher education system. With respect to student cheating, it fundamentally undermines universities' obligation to assess and certify knowledge and abilities:

> the whole system is rendered meaningless when the school system fails to instruct the young to fulfil society's requirements, exams fail to select the best according to stated criteria, and certificates and diplomas fail to record the true quality and accomplishments of students.[7]

With respect to research misconduct, it fundamentally alters the relationship of trust that the academy has with society and so the:

> fallout from scientific misconduct can be pervasive. From the broadest perspective, the public, current and future patients, funding agencies, and even the course of research may be adversely affected by scientific misconduct. At the local level. members of the perpetrator's laboratory, colleagues, trainees, and the financial resources and reputation of the home institution may become tainted. The costs associated with these acts are substantial.[8]

It is also not unreasonable to suggest that misconduct in the academy is connected to larger societal corruption. Researchers[9] have demonstrated a link between cheating in school and dishonesty in other personal and professional aspects of life. These findings make sense because if academic misconduct is left unaddressed and allowed to proliferate, members of the academy learn:

> that personal effort and merit do not count; and that success comes rather from favouritism, manipulation and bribery. It thus contributes to the development of a 'culture of corruption' and of cynicism. It undermines any incentives that would motivate young people to work hard. In this sense, it contradicts one of the major aims of education, which is to transmit civic culture together with values of integrity, equity, fairness and social justice.[10]

---

1. https://lordslibrary.parliament.uk/higher-education-cheating-services-prohibition-bill-hl/
2. https://www.teqsa.gov.au/latest-news/articles/intelligence-sharing-updated-cheating-website-database
3. Newton, P.M. (2018).
4. Janke, S., et al. (2021).
5. Xie et al. (2021).
6. Ibid.
7. Eckstein (2003).
8. Michalek et al (2010).
9. Guerrero-Dib et al (2020); Harding et al (2004); Orosz et al (2018).
10. Eckstein (2003).

So, integrity matters. Even the smallest amount of misconduct, left unchecked, can corrupt an institution because the ease of misconduct without consequence is too tempting to ignore and too easy to become a habit. Researchers generally agree that creating a culture of integrity, a context in which misconduct is perceived by members as an unacceptable solution to a problem, is the ultimate solution and antidote to corruption.

Cultures of integrity can be created, in part, by persistent and intentional practices and efforts to change "private values" that conflict with, or serve to undermine, integrity, and knowledge, and the normative behaviours that flow from those private values. However, for new behaviours to take root and become normative, institutional members must see evidence that integrity is a value embedded within the institution's structures and leadership's actions.

The Council of Europe has worked for decades to promote and ensure quality education which is free of corruption. Recommendation CM/Rec(2012)13 of the Committee of Ministers to member States on ensuring quality education considers that ethics, transparency and integrity are preconditions for achieving quality in education which should be taken into account in quality assurance processes.

In 2015, the platform to promote ethics, transparency and integrity (ETINED Platform) was established to "share information and good practices among member States in the widest possible way; and raise awareness of the issues of ethics, transparency and integrity in education".

On July 13, 2022, the Council of Europe's Committee of Ministers adopted a Recommendation aimed at assisting member states in combating fraud and thus helping them ensure the right to education for all learners. The recommendation addresses the need for a common European approach in this field and is structured in four dimensions: prevention, prosecution, international cooperation, and monitoring.

Through describing best practices as selected by the Council of Europe's Best Practice Programme in Promoting Academic Integrity (see Table 1), this compendium provides evidence of institutional efforts to create cultures of integrity in the fight against corruption that arises from misconduct. Before getting into the detail of these best practices, the Programme is described and the methodology for selecting the best practices detailed. Then, the award-winning practice – The Dilemma Game (Erasmus University Rotterdam) – is thoroughly detailed. After describing the 9 commended practices, an overview of other relevant applications is provided. This compendium concludes with lessons that can be learned from the best practices for creating cultures of integrity within higher education institutions.

RECOMMENDATIONS OF THE COUNCIL OF EUROPE COMMITTEE OF MINISTERS ON TRANSPARENCY, ETHICS AND INTEGRITY

Recommendation CM/Rec(2022)18 of the Committee of Ministers to member States on countering education fraud (2022)

Recommendation CM/Rec(2019)9 of the Committee of Ministers to members States on fostering a culture of ethics in the teaching profession – Explanatory Memorandum

Recommendation CM/Rec(2007)6 of the Committee of Ministers to member states on the public responsibility for higher education and research just one reference: Responsibility for research

Recommendation CM/Rec(2012)13 of the Committee of Ministers to member States on ensuring quality education

RECOMMENDATIONS OF THE COUNCIL OF EUROPE PARLIAMENTRY ASSEMBLY ON TRANSPARENCY, ETHICS AND INTEGRITY

Ethics in science and technology: a new culture of public dialogue (2020)

Good governance and enhanced quality in education (2014)

Table 1

Award Winning	Practice Title	Institution Name	Country/Region	Category of Best Practice	Target Group	Brief Description
Commended	The Dilemma Game App	Erasmus University Rotterdam	The Netherlands	Training	Staff & Students	An application to stimulate awareness and discussion about research integrity.
Commended	Interactive Research Base for Research Integrity CO:RE	University of Oslo	Norway	Teaching & Learning	Staff & Students	A webinar series, interactive resource base and discussion forum to enhance research integrity.
Commended	Activities in the Department of Social Human Sciences	Technical University of Moldova	Republic of Moldova	Teaching & Learning	Students & Staff	Courses and conferences to disseminate and preserve academic integrity.
Commended	University Education Quality Assurance Practices	Lesya Ukrainka Volyn National University	Ukraine	Policy	Staff & Students	A holistic approach to developing a culture of academic integrity.
Commended	The Embassy of Good Science	Amsterdam UMC, Vrije Universiteit Amsterdam	The Netherlands	Communication	Staff & Students	An open-sourced online platform to encourage a positive approach to setting transparent standards for research integrity.
Commended	Holistic Approach Towards Academic Integrity	University of Montenegro	Montenegro	Procedures	Staff & Students	A holistic approach to developing a culture of academic integrity.
Commended	Mind the GAP: Online Training on Good Academic Research Practices	Flemish Interuniversity Council (VLIR)	Belgium	Training	Students & Staff	A novel online research integrity training tool aimed at PhD students as well as more experienced researchers.
Commended	Privacy in Research: Asking the Right Questions	University of Groningen	The Netherlands	Training	Students	An online course to help students become informed and responsible actors in the digital research world.
Commended	Research Integrity & Responsible Scholarship Course	Vrije Universiteit Amsterdam	The Netherlands	Training	Students	A safe place for graduate students to discuss research integrity dilemmas and violations.
Commended	VIRT2UE PhD Research Integrity Course	Amsterdam UMC, Vrije Universiteit Amsterdam	The Netherlands	Training	Students	A research integrity course to foster the knowledge and skills PhD students need to tackle integrity dilemmas.

THE COUNCIL OF EUROPE BEST PRACTICE PROGRAMME IN PROMOTING ACADEMIC INTEGRITY

RECOGNISING ACADEMIC INTEGRITY BEST PRACTICES

Despite the importance of creating academic integrity cultures to fight against the corruption that can stem from academic misconduct, there is little recognition of the efforts that educational institutions make towards building and maintaining academic integrity. University ranking systems, like those by Times Higher Education or QS World University Rankings, certainly do not measure attention to academic integrity, yet universities use these rankings to pronounce prowess and superiority. Although the European Higher Education Area, formed to unite European higher education systems, has committed to "promoting and protecting fundamental values" such as "academic freedom and integrity", there does not seem to be any particular action to demonstrate that individual institutions are held to that commitment.

The lack of recognition of academic integrity practices is not simply a regrettable symbolic indicator; silence can impact behaviours. We know that individuals and institutions are more likely to spend time, effort and resources on issues that matter to those with the power and authority to lead or influence. Good practices help stimulate changes in behaviour and culture by raising awareness of academic integrity, increasing the desire of staff and students to protect and uphold integrity, and enhancing their knowledge of how to act differently; awareness, desire and knowledge are the three key requirements for successful organisational change[11]. Thus, in order to encourage European higher education institutions to attempt academic integrity initiatives and implement best practices, they must see that their efforts are considered important, relevant, and worthy of recognition.

THE CALL FOR BEST PRACTICES IN PROMOTING ACADEMIC INTEGRITY

The Council of Europe, with its Platform on Ethics, Transparency and Integrity in Education (ETINED), is the perfect body to recognise such integrity efforts. After all, ETINED proposes a new approach to ethics, transparency and integrity in education based on the idea that quality education will only be achieved, and corruption effectively addressed, if all relevant sectors of society fully commit to fundamental positive ethical principles for public and professional life. Essentially, integrity is then seen as the connection between positive ethical principles and quality in education.

In this light, the Council of Europe's Best Practice Programme in Promoting Academic Integrity identifies good practices in promoting/safeguarding academic integrity. Given the timing of its first call in 2021, the programme was particularly interested in recognising best practices in the face of the difficulties that had transpired since the beginning of the COVID-19 pandemic and Emergency Remote Teaching.

---

11. Hiatt (2006).

The Call, issued on April 28 2021, invited applications from all public and private higher education institutions, and student unions within such institutions, recognised as belonging to the education system of one of the States parties to the European Cultural Convention.

CoE-BPP Categories

In the Call, applicants were encouraged to highlight their academic integrity best practices in 6 different categories:

Teaching and Learning

Based on academic integrity research, the CoE was interested in hearing about classroom practices that promote a culture of integrity in online and blended learning environments such as: good instruction initiatives, meaningful and authentic assessments, learning activities that build meta-cognition and master (versus performance) orientated environments. The call also encouraged institutions to share best institutional practices, such as course relief for faculty to revamp their classes or assessments with integrity in mind, enhanced 24/7 learner support, and developmental or educational responses to integrity violations.

Policy

It is clear from the research that a good academic integrity policy is essential for promoting academic integrity because it helps to ensure fair and responsible responses to integrity breaches, and clearly articulated policies can instil institutional change. Relevant policy practice includes a grounding in moral development theory, so that the policy is more focused on educating and development and not on punishing students or researchers. Best practices indicate that the policy should be: campus-wide, easy to locate and read, clearly outlining the responsibilities of all stakeholders, providing sufficient detail of breaches, and informing readers of the support that exists for upholding integrity. The Call also specifically asked for examples of relevant policies that were modified or enhanced to respond to the challenges brought about by mass online teaching, learning, and research.

Procedures

The procedures for responding to integrity breaches are a crucial component for promoting academic integrity. If the procedures are perceived to not be fair, responsible, respectful or trustworthy, there will be little community buy-in to academic integrity. The best procedural practices include, at the very least due process, which can be simply described as giving students and researchers the right to be notified that they are suspected of a breach and the opportunity to give their response to the notice. Best procedural practices can also include a clear and standardised categorisation of integrity breaches and the transparent communication of how each category will be responded to. Finally, procedures that are focused on restoring harm, rather than punishing, tend to be more effective and therefore may be considered good practice. Again, the Council of Europe specifically invited applicants to highlight any best practices for operationalising procedures during Emergency Remote Teaching to ensure due process.

Communication

Communication about institutional expectations, values and beliefs (and policy) is necessary for creating shared understanding within a diverse community and countering contrary beliefs long held by members of the community. Communication by institutions and faculty also counter the "misconduct-as-a-strategy" narrative that might exist within a society which sees tertiary education as an economic necessity rather than learning opportunity. In other words, communication is necessary for creating and maintaining cultures of integrity, especially in pandemic times where interests in surviving might take precedence over interests in acting ethically or with integrity.

Best communication practices include presenting a visible presence of ethics/integrity through educational campaigns and institutional messaging sent to students and researchers, as well as classroom-based communications about academic integrity delivered to the students in course syllabi, lectures, presentations, or other class-orientated formats.

Governance/Structures

Clear and distinct academic integrity governance or structures are necessary to strengthen the oversight of academic integrity and to support the promotion of integrity. Creating a culture of integrity will be much more

difficult without such structures which, at the very basic level, send a signal to institutional members that integrity matters. At a more fundamental level, structures operationalise and institutionalise the promotion of academic integrity. The manifestation of governance and structures will be unique to each institution; therefore the Call did not dictate what is or is not a best practice. For example, some institutions are successful at promoting integrity through an honour code or modified honour code structure, while others may use committees, faculty bodies, an academic integrity office, an office on quality assurance, a teaching centre, or an ethical conduct office as their structures. Institutions were invited to highlight their practice and then identify how it was a best practice according to the specified criteria (see below).

Training

To promote academic integrity within public and private higher education institutions, staff and students will need to increase their knowledge of academic integrity through in-person and online modes of delivery and equip themselves with the skills needed to act with integrity. As with governance/structures, the best practice for a particular institution would be dependent on what the constituents within that institution need. Training best practices may focus specifically on the academic skills students need to avoid integrity breaches in online courses (such as citation, study skills, time management) or the responsible conduct of research skills needed by students and staff. However, it could be that a best practice focuses on training instructors how to prevent cheating in their classes as well as how to teach in an emergency remote or online setting while maintaining integrity. Still yet, another best practice might focus on developing ethical decision-making skills in students, staff and faculty. The Call also did not dictate how the training needed to be conducted (i.e., in-person or online), nor the format for the training (e.g., workshops, classrooms, seminars). Institutions were invited to highlight their practice and then identify how it was a best practice according to the specified criteria (see Table 2).

The CoE-BPP Application

The Application Form (see Appendix A) asked applicants to describe their practice, the problem the practice was intended to resolve, the conceptual/theoretical basis behind the practice design, the main activities of the practice, the number of people impacted or reached by the practice, the extent of stakeholder involvement in the design and implementation of the practice, the cost of the designing and implementing the practice, and any information they had on initial impact/evaluations and replicability of the practice.

THE SELECTION METHODOLOGY

The 2021 Call resulted in the receipt of 46 applications from 43 institutions in 24 countries:

- ► Albania (2)
- ► Austria (3)
- ► Azerbaijan (1)
- ► Belgium (1)
- ► Bosnia & Herzegovina (1)
- ► Bulgaria (1)
- ► Croatia (2)
- ► Cyprus (1)
- ► Georgia (1)
- ► Germany (1)
- ► Hungary (1)
- ► Italy (1)

- ► Malta (3)
- ► Montenegro (1)
- ► The Netherlands (6)
- ► North Macedonia (2)
- ► Norway (1)
- ► Poland (2)
- ► Portugal (6)
- ► Republic of Moldova (2)
- ► Romania (2)
- ► Serbia (3)
- ► Türkiye (1)
- ► Ukraine (1)

The applications were initially screened by CoE staff for eligibility based on 3 criteria: 1) does the institution reside in a European Cultural Convention country; 2) is the applicant either a higher education institution or student union within a higher education institution; and, 3) is the application complete. 45 applications met these criteria and were therefore forwarded to the Evaluation Panel for review; one applicant was eliminated for consideration because it was submitted by neither a higher education institution nor a student union.

The Evaluation Panel was comprised of 7 European members:

- ► A representative from the academic community
- ► A representative from a public authority
- ► A representative from the student community
- ► A representative from the recognition community
- ► 3 representatives from the CoE Secretariat

Evaluation Round 1

Each member of the Panel individually assessed each of the 45 applications according to the 6 award criteria prescribed in the original Best Practices Programme Call (Stakeholder Involvement, Effectiveness, Efficiency, Sustainable, Values-Based and Replicability) on a scale of Absent (not at all evident) to Outstanding (evidence of a best practice). See Table 2 for the Evaluation Rubric.

Each scale marker was assigned a numerical value: Absent (0 points), Minimal (25 points), Acceptable (50 points), and Outstanding (75 points). Then, each of the 6 award criteria were weighted to reflect their importance in determining a best practice that is particular to a programme promoting academic integrity. Thus, the Values-Based rating was weighted at 35%, the Stakeholder Involvement, Effectiveness, and Sustainability ratings were weighted at 15% each, and the remaining two (Replicability and Efficiency) were each weighted at 10% each, resulting in a total score from each Evaluator, for each applicant.

Table 2. Evaluation rubric

Criteria	Absent	Minimal	Acceptable	Outstanding
Stakeholder Involvement	No evidence of stakeholder involvement at all	Stakeholders <u>were included in 1 phase</u> of the programme/practice, whether in design (given a chance to comment on the programme/practice <u>before</u> it was implemented), implementation (providing input during the programme/practice), <u>or</u> in maintenance (stakeholders were surveyed about the programme/practice <u>after</u> engaging with it).	Stakeholders were included in at least 2 of the phases of the programme/practice: design (before), implementation (during), and/or maintenance (after). This could look like a representative committee involved throughout the process, or extensive surveys and feedback mechanisms in 2 of the phases.	Stakeholders were included throughout all 3 phases of the programme/practice as both users/recipients as well as designers/implementers. For example, perhaps the larger community was surveyed for their ideas for the programme/practice, and representatives were included through the process of design, to implement and to maintain the programme/practice.
Effectiveness	No evidence of the effectiveness of the programme/practice	Data on effectiveness was collected from less than 20% of the targeted audience OR the N was larger but the assessment was not designed to provide limited data (e.g., only attitudinal but not behavioural change was assessed). Also, could be there is no data yet but programme/practice is in its infancy and shows promise.	Data on effectiveness was collected from 20-25% of the targeted audience OR the N was smaller but the assessment design was robust and measured multiple areas of effectiveness.	Data on effectiveness was collected from at least 20% of the target audience and the assessment design was robust and measured multiple areas of effectiveness.
Replicability	No evidence that the programme/practice is replicable to other settings	There is evidence that one of the key success factors is present: solid theoretical background; mission is global, not local; third-party endorsement; involved parties are sharing & consulting with other entities	There is evidence that 2 key success factors are present: solid theoretical background; mission is global, not local; third-party endorsement; involved parties are sharing & consulting with other entities)	There is evidence that at least 2 key success factors are present: solid theoretical background; mission is global, not local; third-party endorsement; involved parties are sharing & consulting with other entities <u>AND</u> entities other than original implementers (e.g., another faculty or another institution) have implemented a programme/practice modelled after this one.

Criteria	Absent	Minimal	Acceptable	Outstanding
Values Based	No evidence that the programme/ practice is value-based or connected to academic integrity at all	There is evidence that the programme/practice is minimally or tangentially connected to academic integrity; some mention of Fundamental Values (courage, honesty, respect, responsibility, trustworthiness & Fairness)	There is evidence that one of the goals of the programme/practice was to enhance academic integrity or reduce cheating, and 1-3 Fundamental Values were intentionally incorporated into the programme/practice.	There is evidence that the practice's main focus was on enhancing academic integrity or reducing cheating, and all 6 fundamental values (honesty, trust, responsibility, respect, fairness, and courage) were intentionally incorporated into the programme/practice.
Efficiency	No evidence of cost-effectiveness or other efficiency measures (e.g., minimisation of costs, avoidance of waste or good ratio of cost to % of populated reached)	There is evidence that the programme/practice intentionally factored in at least one way to minimise costs (e.g., by involving volunteer stakeholders) OR avoid waste (e.g., maximising use of free or reusable resources).	There is evidence that the programme/practice two or more ways to minimise costs (e.g., by involving volunteer stakeholders), avoid waste (e.g., maximising use of free or reusable resources), and/or reach a larger targeted group without increasing costs.	There is evidence that the programme/practice is cost-effective - the costs and waste is minimal compared to the total population reached and impacted (cost must correlate while with effectiveness and sustainability criteria)
Sustainability	No evidence that the programme/practice is sufficiently funded/resourced to continue over time.	The programme/practice is in year 1, but there is at least one sign of sustainability (e.g., programme/practice has standards/protocols, permanent funding, and/or public support by those with funding sources).	The programme/practice has occurred 2-4 more times since initial implementation and has at least two other signs of sustainability (e.g., programme/practice has standards/protocols, permanent funding, and/or public support by those with funding sources).	The programme/practice has occurred at least 5 times since initial implementation and has been codified/standardised, permanent funding, and public support from those with funding sources.

Once the individual ratings were complete, they were compiled to calculate a total mean score and standard deviation (to indicate the extent of congruency among evaluators) for each applicant. These scores were used to sort the applicants into 3 different groups: 1) eliminate without discussion; 2) discuss; and 3) move to second round without discussion.

▶ *Eliminate Without Discussion.* Applicants that did not receive at least an overall "acceptable" score from each evaluator or had a total score mean less than 50 with a standard deviation of less than 3 were proposed to be eliminated from consideration. As a result, 23 applicants were eliminated as they received low marks from all the evaluators. Another 7 were marked as potentially eliminate without discussion as they received low marks from most of the evaluators; for these 7, an individual evaluator could request discussion. In the end, one applicant from this group was moved to the discussion round at the request of an evaluator; the remaining 29 were eliminated without discussion.

▶ *Move to Second Round Without Discussion.* Applicants that reached an acceptable score from each evaluator and/or those with a total panel mean over 50 and a standard deviation of less than 3 were proposed to move to Evaluation Round 2 without discussion, unless there was a specific request from an evaluator to discuss. 9 applicants achieved this level; 4 moved forward to Evaluation Round 2 without discussion but 5 were moved to Discussion at the request of evaluators.

▶ *Discuss.* Applicants that received a total acceptable score from at least one evaluator, but the standard deviation between total scores was greater than 3 (meaning there was not a consensus or even clear majority opinion about these applicants) were moved to Discussion. 6 applicants were sorted into this group.

As a result of the above process, 12 applicants were discussed. At the discussion phase, the Evaluation Panel gathered with CoE staff members and the consultant to discuss and reach agreement on each of Applicant. Of those discussed, 6 were moved forward to the second round while 6 were eliminated.

In the end, after reviewing the scores of all 45 applicants and discussing 12, 10 applicants moved on to Evaluation Round 2.

Evaluation Round 2

Online verification interviews were then held with the 10 shortlisted applicants in order to verify the practices and discuss them in more depth with a specific focus on award criteria. When deemed necessary, additional documents were also requested to further complement the applications. The interviews were conducted by the CoE Secretariat (2 members from the evaluation panel and a staff member responsible for the ETINED Platform). The independent experts could join all interviews based on their availability. Following the interviews, the CoE Secretariat prepared and shared a summary report, along with additional documentation, with the evaluation panel. After a review of this additional information, each evaluation panel member ranked the 10 shortlisted candidates from 1 (lowest) to 10 (highest). Following a review of the individual scores, the evaluation panel selected the practice Dilemma Game App from the Erasmus University Rotterdam as the 2021 winner of the Council of Europe Best Practice Programme in Promoting Academic Integrity. The evaluation panel also decided to award commendations to the remaining nine candidates.

BEST PRACTICE: THE DILEMMA GAME APP (ERASMUS UNIVERSITY ROTTERDAM)

" *An application to stimulate awareness and discussion about research integrity.*

The Dilemma Game by Erasmus University Rotterdam (EUR) is an application developed to stimulate awareness of, and discussion about, research integrity and professionalism. True to its name, the Dilemma Game engages participants in dilemmas related to professionalism and integrity in research, requiring them to choose and defend courses and alternative courses of actions to resolve the dilemmas.

The Dilemma Game was initially developed in 2013 as a hard copy game distributed throughout the university. However, the results of a university-wide survey on research integrity (conducted in 2019) revealed that there was a need to increase general awareness of research integrity as well as specific knowledge of the relevant principles and conduct codes that should be used to make decisions when facing integrity dilemmas. In addition, while the hard copy game was well-known and used, the survey results indicated that it lacked accessibility.

These survey results led the University to digitise the game in order to:

► make the game more accessible to a much wider audience, who can play it anytime, anywhere;

► inspire continuous attention to academic integrity and raise awareness about the importance of research integrity;

► meet the demand for discussing currently relevant dilemmas in a quickly changing world;

► provide more realistic and relevant dilemmas for users in any researcher position (student/PhD/researcher/ leader), using any research strategy (survey/experimental/data), and engaged in all research phases (design/data collection/processing/archiving/publication);

► familiarise more community members to the relevant principles and conduct codes relevant to making integrity-based decisions; and,

► create an open, safe and inclusive research culture in which integrity dilemmas are discussed openly.

The digitised Dilemma Game was built to be easy-to-use and navigate within a variety of settings. As a result, the app has three modes:

► **Solo:** In solo mode, a participant can individually browse through dilemmas (or filter by research phase, researcher position or research strategy). After choosing and considering a dilemma, the user can vote on their preferred choice of action (out of four choices). After their vote, the user will see how other users have voted and can read an expert review of the dilemma that gives an in-depth analysis of the dilemma and the underlying principles for decision-making. (see Figure 1)

► **Group:** The group mode facilitates the discussion (physically or online) of the dilemmas within small groups of 2–7 players by guiding players through the different discussion phases. The group mode works best when the participants are together physically or in a synchronous online environment and is designed to operate as in a peer instruction manner[12]. To play, one group member creates a room, selects the dilemmas the group wants to discuss, and once all members are in the virtual room, begins the game. The app automatically guides the players through each step. First, in each round of the game, a "main player" is automatically selected. This player is prompted to read aloud the dilemma and the four options. The players are then prompted to vote. The app then displays the choice of the main player who must explain and defend their choice. After this, the app reveals the choices of all players and prompts the players to challenge and defend their choices. When the discussion is over, the main player selects "revote" and all players are invited to revote with the same or, if they were swayed by the discussion, different choice. Once the re-voting occurs, the app concludes the round and begins a new round, automatically selecting a new main player. The game ends when all selected dilemmas have been completed.

► **Lecture:** The Lecture mode is suitable for a plenary discussion of dilemmas with larger groups, such as a big class or a lecture audience. In this mode, the lecturer, rather than the app, facilitates the game. The instructor/facilitator selects "create new room" and selects lecture mode. Then the lecturer chooses specific dilemmas to discuss, shares a code with the participants so they can join the room, and then the app works like other online voting apps (e.g., Slido and PollEverywhere) where the facilitator can project the dilemma, choices, and voting results in real-time on a screen at the front of the room. Unlike in the group mode, there is no main player, so all players results are projected at once. The lecturer can then host a plenary discussion on the different options that people in the audience may have chosen. When the discussion is over, the lecturer can move on to the next dilemma until all dilemmas have been completed.

CONCEPTUAL BASIS

The Dilemma Game supports participants in identifying relevant research integrity principles, virtues and questionable research practices, using hypothetical cases. Case studies, also known as dilemmas, have been well documented as essential elements of research integrity training[13], and presenting such dilemmas in the form of a game is considered even still more effective.[14]
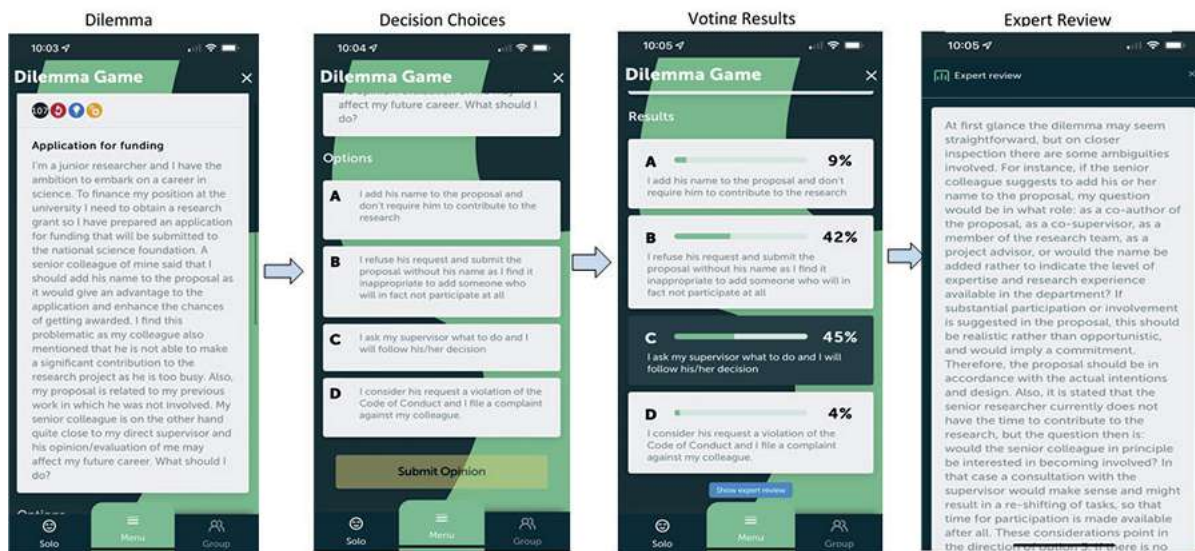

Figure 1

Since January 2021, the app has been downloaded by more than 10 000 users. The over 100 cases and associated expert reviews in the Dilemma Game were carefully constructed to reflect and bring attention to the principles within the Netherlands Code of Conduct for Research Integrity (2018): Honesty, Scrupulousness, Transparency, Independence, and Responsibility. In addition, the dilemmas were created to appeal to different types of researchers, research strategies and research phases, to better reflect the realities faced by the game players. The breakdown of the three categories is as follows:

---

12. https://mazur.harvard.edu/research-areas/peer-instruction
13. Kalichman (2007).
14. Grasse et al (2022).

Researcher Position	Research Strategy	Research Phase
General*	General	General
Research Leader	Survey Research	Research Design
Researcher	Experimental/Clinical	Data Collection
PhD Student	Existing/Collectable Data	Data Processing & Analysis
Student		Data Archiving & Access
		Publication

*The General label refers to dilemmas that could belong to more than one category.

As can be seen in the image to the right, each dilemma is labelled so its categories can be quickly discerned.

So, for example, the dilemma pictured on the left (entitled "A woman short") is crafted to appeal to Research Leaders, using any type of research strategy (general), during the research design phase. The case describes a female biologist who, just before she submits a grant application, is advised to add another female to her team because presently all of the other members are men. However, if she adds anyone new to the project now, it would be someone who has not contributed to the project thus far. So, the dilemma is: should she add a new member or not?
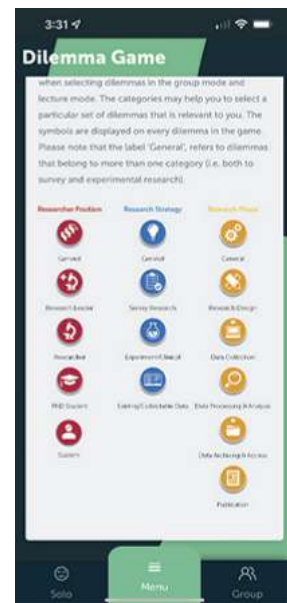
The group and lecture formats of the game were created to reflect the University's commitment to discussing, promoting and adopting open and transparent research practices at every stage of the research cycle, from initial idea to final product. The group and lecture formats extend an individual participant's thoughts into critical dialogue with others thereby helping not only to develop individual moral compasses but a shared moral compass for the community.

Lastly, the app itself refers to relevant information sources, such as the research integrity website of the university and the Netherlands Code of Conduct for Research integrity. Users can even submit their own dilemmas and receive input from the research integrity community.

Using a framework for responsible conduct of research training topics[15], a review of the over 100 dilemmas in the app suggests there is a wide coverage of the common ethical dilemmas faced by researchers, from the student to the leader level. Dilemmas such as:

► authorship issues (e.g., An outstanding thesis dilemma; More than a thousand papers dilemma; Fifty-fifty dilemma);

► research misconduct and questionable research practices (e.g., Mechanisms of defence dilemma; Psychopharmaceuticals dilemma);

► data management (e.g., Original images dilemma);

► scientific rigour and reproducibility (e.g., Golden scientific standard dilemma);

- ► responsible authorship and publication (e.g., Dubious Literature dilemma; A generous offer dilemma);
- ► peer review (e.g., Conceptual analysis dilemma; Over-critical dilemma);
- ► mentor/mentee responsibilities and relationships (e.g., Use work of a master student dilemma);
- ► civility issues in research environments (Depression dilemma);
- ► policies regarding laboratory safety, biosafety, and human and animal research subjects (e.g., Lab hazards dilemma); and,
- ► views about scientists as responsible members of society (e.g., Should I stay, or should I go? dilemma).

There are also a few dilemmas to encourage students to think about integrity in their coursework (e.g., Reuse?; Can I borrow?; and Need help? dilemmas), so the game provides a robust coverage for academics and researchers at all levels.

ACHIEVEMENT OF BEST PRACTICES EVALUATION RUBRIC

The Erasmus University Rotterdam Dilemma Game received the top award in this Best Practices Programme because it was the practice that best met the Council of Europe's criteria for best academic integrity practices:

Stakeholder Involvement

The Erasmus Research Integrity Taskforce extensively involved stakeholders in the development of the digitized game, from PhD candidates to policy makers, integrity experts, IT experts, privacy experts, academic staff, students and a research integrity network. PhD candidates helped in the design and development to ensure it would be accessible and interesting. Policy makers ensured the widespread implementation of the app within the institution and policy in accordance with relevant principles and codes of conduct. Integrity experts wrote the expert reviews and checked the validity and intelligibility of new dilemmas; they also propagated the use of the app within tutorials and seminars. IT experts ensured the technical execution of the app development, while privacy experts made sure the app followed best privacy practices. And many academic staff, students, and research integrity professionals tested the game and provided feedback.

Replicability

The game is already available to use by anyone in the world and easily translated into other languages as the EUR is willing to share the source code. So, its replicability is outstanding.

Sustainability

The digitization of the game and the ease of updating it with new dilemmas means that it is adaptable to incorporate developments in the field and new contexts. Thus, its sustainability is outstanding.

Efficiency

While the initial development seems costly at approximately 60,000 Euros, the app is now very efficient in terms of usability, avoidance of waste (by moving from hard copy to digital), and a reach to an ever-growing audience without substantial costs. The efficiency of the app over time can be difficult to project as IT costs or other costs may increase, but the initial investment seems very efficient given the ability to reach a large audience and adapt to new situations.

Effectiveness

A formal evaluation is planned for phase two of the app's development, but there is anecdotal evidence that The Dilemma Game has been found to be effective by its users. It has become the standard academic integrity training for PhD students at the University. All graduate schools are using the app as part of a research integrity module, and it is also used for some bachelor and master programmes and with staff around campus. In addition, the game is used widely by other institutions in both the Netherlands and abroad. During the COVID-19 pandemic, anecdotal feedback was received that the Dilemma Game is a great tool to provoke and guide online discussion about research integrity.

Values

The Netherlands Code of Conduct for Research Integrity[16] defines the principles and standards for research integrity, which are honesty, scrupulousness, transparency, independence and responsibility. These values were programmed into the game from the beginning to ensure that the dilemmas were focused on developing a shared moral research community centred on these values.

The Dilemma Game by Erasmus University Rotterdam certainly stands at the forefront of best integrity practices and serves as a model for creative and contemporary approaches to teaching responsible conduct of research as well as for stimulating dialogue and awareness which can serve all universities well in creating strong ethical communities.

The Dilemma Game can be found online at http://eur.nl/dilemmagame and anyone interested in receiving the source code or learning more about the app can email dilemmagame@eur.nl.

---

16. https://www.nwo.nl/en/netherlands-code-conduct-research-integrity

COMMENDED PRACTICES (ALPHABETICAL ORDER BY PRACTICE TITLE)

The following practices were commended for their achievements. The practices are described in alphabetical order (based on practice name). Each practice write-up is divided into the following sections: Practice Description, Problem Solved, Conceptual Basis, Number of People Served, and Stakeholder Involvement, Efficiency, Effectiveness & Replicability of the practice. We hope that such thorough descriptions of the practices will inspire other institutions to create their own practices, or submit their existing practices to the next competition for recognition.

COMMENDED PRACTICE: INTERACTIVE RESOURCE BASE FOR RESEARCH INTEGRITY CO:RE (UNIVERSITY OF OSLO)

> *A webinar series, interactive resource base and discussion forum to enhance research integrity.*

Practice Description

Through a digital webinar series, an interactive resource base, and a discussion forum, the CO:RE program aims to enhance conceptual understanding and practical know-how about research integrity.

The webinar series, featuring presentations and interactive Q&A sessions, focused on: 1) ethical issues arising when engaging with children and young people in online research; 2) theoretical and policy approaches to research integrity; and, 3) associated dilemmas arising in longitudinal and comparative research. During these sessions, the concept of research integrity was clarified and practical challenges associated with its implementation were discussed. The presentations were given by leading policy makers and researchers, and each presentation was followed by a Q&A session so panelists could discuss issues with the audience.

In one webinar, presented by Professor of Anatomy Ana Marušić (University of Split, Croatia), participants learned that all players (from researcher to research organisations, funders and publication editors) have a role to play in ensuring research integrity because incidents of research and publication misconduct can occur along a spectrum of practice, from research design to publication. In another webinar, Professor Göran Hermerén (University of Lund, Sweden) led participants through an exploration of the "grey zones" of research integrity (e.g., "questionable practices") to highlight that there is a lack of agreement on when these behaviours are a result of haste, negligence or incompetence, or deliberate attempts to deceive. Finally, in the webinar led by Assistant Professor Malte Elson (Ruhr University Bochum, Germany), participants vicariously experienced the trials and tribulations of reporting a breach of research integrity as in the case of the 'Boom, Headshot' article[17].

The CO:RE project used the interactions during the webinars, literature reviews and colleague consultations to collate key resources such as guidelines, research projects and evidence about research integrity. These resources, including webinar footage are available on the CO:RE platform, along with a series of blog posts summarising the content of the webinars (see, for example, https://core-evidence.eu/research-integrity-children-online/).

---

17. See https://journals.sagepub.com/doi/abs/10.1177/0093650212446622 for more information.

Problem Addressed by the Practice

Despite the vital importance of research integrity to ensure trust and strengthen the quality of research in practice, it is a concept that can be difficult to grasp and implement. This was made evident when an interactive poll conducted revealed that most researchers and students feel like they do not fully understand research integrity, how to ensure it, or what to do should they discover a research integrity breach. The problem is exacerbated by a lack of interuniversity (and intercountry) agreement on the definition of research integrity, which challenges collaborative research projects that must adhere to different standards and regulations dependent on the locale in which the research is being conducted. Transitioning research to the remote setting during the COVID-19 pandemic added new complications; researchers and students grappled with how to transfer their research projects and interactions with informants and colleagues from familiar offline settings to digital platforms.

CO:RE addressed this knowledge and implementation gap by increasing conceptual understanding amongst researchers, students and other relevant stakeholders, and providing an online and interactive resource base including guidelines and tools to improve practice.

Conceptual Basis

The CO:RE project relied on the ALLEA European Code of Conduct for Research Integrity for their general framework. In designing the activities in the project, Hermerén's conceptualisation of "mutual learning experiences" was foundational, meaning that all stakeholders (from researchers, to research organisations, editors, and funders should learn together[18].

Number of People Reached

Although limited in scope (about 80 people attended each webinar), the practice was commended for having a positive impact on the attendees.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

In honour of the "mutual learning experiences" concept, CO:RE involved a diverse team in the design and implementation of the practice. In addition, the team collaborated with the Norwegian National Research Ethics Committees to develop the resources, and with webinar attendees to build and add to the resource base.

This practice was commended because of its effective multi-pronged approach to reach the audience, which included using a website/online platform to collate research integrity research and then leveraging blog posts, social media and webinars to share knowledge. In their post-event surveys, the majority of attendees were overwhelmingly positive about CO:RE, rating the webinars with 4 or 5 out of a total of 5 on each aspect. A number of participants pointed out that they learned something new about research integrity, how to report breaches, and how difficult it was to manage research integrity in practice.

The practice was also cost and time efficient. The webinars enabled international researchers to convene and engage with a global audience without incurring travel and accommodation costs. The use of readily available tools such as Zoom, YouTube, WordPress, Zortero and Social Media added flexibility, and on the recording of the webinars (with the consent of the participants) was an efficient way to add knowledge to the CO:RE resource base.

Finally, the practice is commended for making their resources widely and freely available to any institution or researcher that would like to use or contribute to them.

---

18. https://core-evidence.eu/posts/talking-about-research-integrity

> *Courses and conferences to disseminate and preserve academic integrity.*

Practice Description

The mission of the Department of Social Human Sciences (DSHS) is to support a culture of integrity, engender a sense of social responsibility in relation to engineering, refine the behaviour of young people, and form a general understanding of nature, society, and human life. In the context of the pandemic crisis, DSHS members developed new study programmes to tackle academic misconduct, such as; Ethics and Academic Integrity; Communication and Academic Writing; Intellectual Property Law; and, Philosophy and Critical Thinking. The new courses disseminate and preserve the values of academic integrity by educating and raising a conscious attitude among students and teachers. DSHS also cultivates research integrity skills in their annual Interuniversity Scientific Conference and their Technical-Scientific Conference.

Problem Addressed by the Practice

The shift to remote research and academic study caused by the COVID-19 pandemic increased the vulnerability of educational quality and academic integrity. The power and ease of information and communication technologies accentuated the vulnerabilities of education systems around the world and forced changes in practices. In addition, new moral dilemmas with deep legal, political, cultural and social tangents emerged and tested actors within the educational process.

So, the University adapted existing ethics courses to the new circumstances and identified effective ways to stimulate solutions to possible academic integrity problems that occur in both the teaching-learning-assessment process and research activities. The DSHS decided to focus on helping students and teachers adopt new behaviours in response to the confusing moral and legal norms brought on by the sudden transfer of activities to the online environment.

Conceptual Basis

Conceptually, DSHS considers rationality as a necessary "guide" for students as they form an honest, responsible and cultured personality. All of the courses aim to cultivate rationality so that the students might grow and form a self-conscious individuality, as well as understand the consequences of their own decisions. In the opinion of the DSHS, the field of applied rationality represents a favourable environment to inculcate the values of the International Center for Academic Integrity (ICAI): fairness, respect, responsibility, trustworthiness and courage[19].

Number of People Reached

The courses and conferences targeted students from all University faculties, with few exceptions, which represents 95% of the student body and faculty body. In addition to this, the conferences were attended by students from higher education institutions in Romania, Russia, Tajikistan, Kazakhstan and Ukraine, as well as scientific researchers from Romania, Russia, Belarus and India.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

The members of the DSHS team worked collaboratively with students and colleagues from other higher education institutions in Moldova, Romania and Russia to organise many joint events and engage in mutual participation in the conferences. The activities are relatively efficient given that they are embedded as part of the normal operations of the DSHS. While effectiveness of the activities has not been formally measured, they should be easily replicable in other institutions.

---

19. https://academicintegrity.org/resources/fundamental-values

" *A holistic approach to developing a*
culture of academic integrity.

Practice Description

The Education Quality Assurance Department (EQAD) of the Lesya Ukrainka Volyn National University (LUVNU) implements elements of academic integrity among three main target cohorts, namely administration, teachers, and students in order to: apply the ICAI fundamental values of academic integrity in the Ukraine setting; promote the development of a democratic student-centred educational and scientific environment based on the principles of ethics, transparency and integrity; maintain and support a high level of culture of academic integrity in order to ensure the quality of teaching and learning; and, prevent any academic integrity violations.

Over the course of 5 years, EQAD created small wins towards creating a culture of academic integrity, such as: developing a Code of Academic Integrity; creating regulations for preventing and detecting academic plagiarism; adopting anti-plagiarism tools; launching an academic integrity website to increase awareness on campus; offering seminars, workshops, and courses to educate community members about academic integrity; participating in the national Academic IQ Initiative Project (administered by the American Councils for International Education); establishing a Research Ethics Committee and Bioethics Commission; and designing and implementing academic integrity weeks and online meetings for their community members. The University's practices were commended for taking such a robust, values-based, and holistic approach to the tackling of academic corruption.

Problem Addressed by the Practice

Ukraine is one of the most politically and economically dynamic countries of the Post-Soviet era. Nevertheless, there are long-standing traditions of teacher-centred pedagogies and authoritarian settings in Ukraine's education system. Insufficient wages, established tradition of corrupt practices at various levels, and lack of transparency of University staff have led to a recent increase in the variety of forms of academic dishonesty, corruption and unethical behaviour in education. The most common forms of academic dishonesty in the educational and scientific activities of Ukrainian universities are: academic plagiarism, self-plagiarism, fabrication, falsification, deception, bribery, biased evaluation.

These problems strengthened the demand to develop nation-wide strategies and tactics for implementing anti-corruption activities in education. As part of the University's participation in this moment, EQAD was created to develop a unified systemic approach to the implementation of academic integrity principles and enhance professional responsibility and integrity among administrators, researchers, teaching staff, and students.

Conceptual Basis

The theoretical framework for the academic integrity approach at the University is rooted in systems framework for creating the ethical academy[20], with focus on values, honour and ethics. This framework emphasises the importance of: garnering wide-spread institutional buy-in at all levels (faculty, students and staff); establishing a centralised office, with time and resources dedicated to academic integrity; implementing clear academic integrity policies & procedures; and, widely communicating institutional values and expectations.

This systems framework approach was further guided standards and guides from the local Ukrainian context including: Law of Ukraine On Education; code of ethics of a scientist in Ukraine; National Agency for Higher Education Quality Assurance (NAQA) recommendations on the development and implementation of a university system to ensure academic integrity[21]; and, the Strengthening Academic Integrity in Ukraine Project (SAIUP).[22]

Finally, the International Center for Academic Integrity's (ICAI) Fundamental Values[23] provided a solid foundation for articulating the desired norms in the integrity culture being built:

20. Bertram Gallant (2011).
21. https://en.naqa.gov.ua/
22. https://academiq.org.ua/pro-proekt/about-us/
23. https://academicintegrity.org/resources/fundamental-values

- ▶ **honesty & trust:** stating expectations and following through; promoting transparency in values, processes, and outcomes; trusting others; giving credence; encouraging mutual understanding; acting with genuineness

- ▶ **fairness**: applying rules and policies consistently; engage with others equitably; keeping an open mind; being objective, taking responsibility for your own actions

- ▶ **respect**: practicing active listening and empathy; receiving feedback willingly; accepting that others' thoughts and ideas have validity; seeking open communication; affirming others and accept differences; recognizing the consequences of our word and actions on others

- ▶ **responsibility**: holding yourself accountable for your actions; engaging with others in difficult conversations, even when silence might be easier; knowing and following institutional rules and conduct codes; creating, understanding, and respecting personal boundaries; following through with tasks and expectations; modelling good behaviour

- ▶ **courage**: being brave even when others might not; taking a stand to address a wrongdoing and support others doing the same; enduring discomfort for something you believe in; being undaunted in defending integrity; being willing to take risk and risk failure

Number of People Reached

All University personnel (undergraduate, graduate and postgraduate students, professors, administrative staff) are reached by the AI Practice. The Academic IQ Initiative Project (2021) survey indicated that 89% of University personnel are highly involved in the academic integrity practice.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

University stakeholders were heavily involved in the implementation of the practice. University officials at all levels and structural subdivisions, worked alongside students, postgraduate students and professors, and in close collaboration with the University Library, Early Career Researchers Board (ECRB), the Postgraduates and Undergraduates Research Society (PURS) and the University Research Ethics Committee (REC). In addition, ICAI, NAQA, and the European AQA[24] and the European University Association (EUA)[25] provided feedback aligned with implementing academic integrity at the University. Finally, continued stakeholder input is encouraged via the establishment of a permanent Response and Suggestion Form, which invites community members to express their thoughts and ideas.

The EQAD practice has been very effective, leading to significant positive changes in terms of: increased awareness about the importance of academic integrity for educational quality and quality assurance; enhanced level of mutual trust among the academic community; advanced culture of integrity among researchers; and, systemised and normalised academic integrity development activities.

These practices can be replicated and adapted to other countries or higher education institutions wishing to set-up an academic integrity office. The staff of EQAD is willing to share their experiences and help other institutions create academic integrity cultures by teaching them how to:

- ▶ clearly and regularly articulate how a culture of academic integrity supports achieving the institution's mission and vision;

- ▶ educate all members of the community about academic integrity standards so that expectations are well understood as integral components of the community culture;

- ▶ regularly assess the perceptions of integrity within the institution;

- ▶ re-envision pedagogy, namely from teacher-centred to student-centred, and to include demonstrated competencies and learning outcomes so students have opportunities to practice, make mistakes, and learn from them; and,

- ▶ provide values of academic integrity and quality of education in students under distant learning.

---

24. https://www.aqa.org.uk/about-us
25. https://eua.eu/

> *An open-sourced online platform to encourage a positive approach to setting transparent standards for research integrity.*

Practice Description

The mission of the Embassy of Good Science[26] is to uphold the values of research integrity and ethics that are fundamental for responsible research practice. The Embassy of Good Science takes a positive approach to setting transparent standards for research integrity through an open-source online platform for the global research community. The platform offers support to anyone seeking help with day-to-day research practices and dilemmas by offering guidelines, education resources and cases. The Embassy of Good Science connects all researchers across the research landscape to share guidance and change their practices.

Visitors to the platform can both use and contribute to one of its four sections: themes, resources, community and training.

▶ *Themes*. The thematic section is intended to help raise awareness and dialogue about relevant issues or "hot topics" such as: principles and aspirations (e.g., dialogue vs debate; values and norms); good practices (e.g., data practices and management; collaborative research); and, misconduct and misbehaviours (e.g., conflicts of interest, paper mills). There are over 220 themes and each theme is written according to the same template: what is this about, why is this important, for whom is this important, what are the best practices, and references.

▶ *Resources*. There are over 1000 items in the resources section, grouped under 4 categories: guidelines, cases, education, and scenarios. Under guidelines, users can find over 200 examples of guidelines, codes, legislation, and standards designed to support good research conduct. Under cases, users can find a selection of over 500 research ethics and research integrity cases, to learn from mistakes and foster debate around them. Under education, users will find over 250 literature pieces and tools about research integrity and ethics, useful for individual education or to develop training courses. And under scenarios, users can find 15 fictional stories that are intended to illustrate good research and common pitfalls.

Users can filter any of the resources by the intended audience (e.g., academic staff, administrators, students), research area (e.g., biology, mathematics), who created the resource (e.g., Allea, Danish Parliament), when the resource was created and in what country, virtues and values (e.g., accountability, fairness), and good practices & misconduct topic (e.g., animal ethics, conflict of interest).

▶ *Community*. In the community section, users can post updates on research integrity initiatives or events (e.g., Virt2ue; TechEthos), and news stories about research integrity.

▶ *Training*. In the training section, users can find training materials (trainer guides, as well as individual exercises), a link to the education folder (under Resources), and an introduction to certified VIRT2UE Trainers.

Problem Addressed by the Practice

Research integrity is defined as undertaking and conducting research in a way that ensures it is honest, reliable, trustworthy and ethical, and meets the expected community and professional standards for how research should be done with care, respect and accountability. Upholding the values of research integrity has never been more important to responsibly conducting research. While research integrity is a capacity that can be enhanced, doing so requires ongoing training and conversation. The Embassy of Good Science, a centralised resource providing detailed information on how to perform research responsibly and with integrity, was created to address this need.

---

26. https://embassy.science/wiki/Main_Page

Conceptual Basis

The Embassy of Good Science adheres to the FAIR principles: findability, accessibility, interoperability and reusability. The open-source platform is technically based on and inspired by Wikipedia (Wikimedia Foundation, USA). The use of Semantic MediaWiki software enables the community to contribute to the platform and take co-ownership of the content. Researchers, signed in with ORCID, can add new content to pre-existing themes, resources and training materials. This approach allows the community to keep the platform relevant and up to date, and the site can be extended and tailored to the needs of the users and society at large.

Number of People Reached

The site has had over 350 unique visitors and 10,000 views. The platform has currently over 160 contributors, who have created over 950 content pages and made over 9000 page edits.

The platform is also visited directly by researchers and students enrolled in the VIRT2UE programme, and over 400 trainers in Europe and beyond have trained over 2000 researchers.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

Focus groups including researchers (from various disciplines and geographical backgrounds) and research integrity professionals (including teachers, research integrity officers, and policy makers) were utilized to fold stakeholder input into the design of the platform and to set priorities regarding content. Stakeholders continue to be directly involved as it is an open-source platform, which enables the community to contribute to and take ownership over the content.

The cost of developing The Embassy of Good Science was expensive. EU funding of 4,2 million euros was received. The ongoing cost is about 100-200K yearly. However, it is built to be very efficient; there are no timelines, the platform can be accessed any time, and contributions made by the users are directly implemented.

Although not formally assessed for its effectiveness, Nature Magazine has recognised The Embassy of Good Science as an exciting grass-roots effort, that connects researchers to each other. In particular, it praised the fact that the Embassy "styles itself as a 'public square' where researchers can find guidance and share knowledge. It contains links to national ethics codes and articles explaining good practice"[27].

The Embassy is highly replicable as all materials and software are made available freely (open source), directly on The Embassy or via https://github.com/the-embassy-of-good-science.

---

27. https://www.nature.com/articles/d41586-019-03782-z

" *A holistic approach to developing a culture of academic integrity.*

Practice Description

The University of Montenegro is commended for adopting an ongoing and holistic approach to academic integrity that implemented initiatives throughout the entirety of the University's operations and educational system through the following main activities:

- ► 2018
  - Implemented iThenticate software and a policy that all Master, PhD, and faculty/researcher level writings are required to be checked before publication;
  - Initiated the International Institute for Research and Action on Academic Fraud and Plagiarism (IRAFPA) certification process to "strengthen integrity through rigorous systems";[28]
  - Appointed Academic Integrity Officers at the faculty level in all faculty units;
  - Appointed the Vice-Rector as the Integrity Manager to ensure that the University's plan would be carried out;
  - Developed the Integrity Plan (which is updated each year);
  - Updated Academic integrity policy documents, including the Rules of Study at Undergraduate Level, the Rules of Study at Postgraduate Level, and the Rules of Doctoral Studies and the Code of Ethics.

- ► 2019
  - Developed the Academic Integrity (organisational) Chart and submitted to the IRAFPA experts as an initial document for the process of certification;
  - Organised an external evaluation of their progress;
  - Adopted a Development Strategy (2019-2024), which defines enhancement of academic integrity principles at the University as one of the main goals;
  - Established a new Ethics Board to be in charge of cases of unethical behaviour (previously called the Court of Honour);
  - Organised promotional activities about AI issue at all faculties.

- ► 2020
  - Adopted the European Higher Education Area (ESG) standards and quality indicators for academic integrity;
  - Developed online academic integrity courses and made them mandatory for all University students.

In addition, throughout all of these years, the University organised a significant number of trainings/seminars/workshops/study visits that included academic and administrative staff as well as students. And the University continuously developed its two-prong communication strategy to: 1) send out frequent individual e-mail communications to familiarise staff with academic integrity issues; and 2) engage in promotional campaigns aimed at building the academic integrity culture and raising awareness about the importance of academic honesty.

Problem Addressed by the Practice

Ensuring that academic staff and students understand the importance of obtaining results and awards through acceptable academic practices (rather than through misconduct) is fundamental to assuring and instituting high academic standards and yielding an honourable and developed society, with a consistent and trustworthy economy based on the rule of law and integrity principles. However, educational institutions in Montenegro were not implementing the practices necessary to achieve this goal. Specifically Vučković and colleagues[29], using the Council of Europe's 2018 ETINED platform report, identified the main problems within Montenegro education systems that needed to be addressed:

---

28. https://irafpa.org/en/methods/guidelines/guiding-principles/
29. Vučković et al (2020).

- ▶ a lack of clear guidelines on how to preserve AI at the level of decision-makers;

- ▶ unclear and inconsistent procedures for implementation of policies;

- ▶ disregard of student cheating as a serious problem;

- ▶ lack of use of external verification measures or tools to detect misconduct;

- ▶ insufficient training for students on academic writing;

- ▶ too heavy a focus on transactional education rather than transformational;

- ▶ disinterest of students in preventing or reporting fraud;

- ▶ lack of training for academic staff to improve their pedagogy and respond to cheating; and,

- ▶ a lack of familiarity of students and academic staff with academic integrity.

Conceptual Basis

Research demonstrates that the most effective way to combat academic misconduct is the adoption of a comprehensive holistic approach, as implementing academic integrity practices in isolation will not generate improvements[30]. A holistic approach to academic integrity addresses behavioural factors, structural obstacles and institutional culture[31], and requires the promotion of academic principles and values in all aspects of university life[32]. The effectiveness of a holistic approach to academic integrity necessitates the involvement of all actors from the academic community, from students, to faculties and administrators[33].

A holistic approach to academic integrity stimulates students to adopt values aligned with academic integrity principles and standards, reinforces those values among all academic members, and creates a framework of fair and transparent procedures[34]. Case studies demonstrate that dealing with plagiarism in a holistic manner generated success at universities of Oxford, Brookes and Sheffield Hallam in the United Kingdom[35]. Moreover, this holistic approach was reinforced by the IRAFPA certification process, which includes various interlinked practices related to academic integrity.

Number of People Reached

At least 60% of the University student population and 80% of academic and administrative staff have been impacted by the new holistic approach to academic integrity implemented at the University of Montenegro.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

Through the establishment of various committees and roles, the holistic approach involves a wide range of stakeholders, ranging from academic and administrative staff to students. For example, the Ethics Committee, which determines if a violation occurred and issues sanctions for violations, has nine members, including a Student Parliament (SP) delegate. The Quality Assurance Board, with eleven members including an SP delegate, as well as the Board for Monitoring Master's Studies and the Centre for Doctoral Studies, assure all theses submitted at the University pass the text-matching software. In addition, in each of the faculties, there are Academic Integrity Officers who are responsible for both the promotion and protection of university ethics, including training for students in academic integrity.

The holistic approach has helped tackle several previously identified obstacles that obstructed the improvement of academic integrity. Primarily, the practice has stimulated broader engagement of the academic community on the issue of academic integrity, student awareness of text matching software utilisation has weakened their intention to plagiarise[36], and the e-learning tutorial served to raise perceived seriousness of seven out of eleven cheating indicators examined[37]. Moreover, as a recognition of the University's effort to strengthen academic integrity culture, the IRAFPA certificate was officially awarded to the University in April 2019.

30. Bertram Gallant & Drinan (2008); Bertram Gallant (2011); Davis et al (2009); Kibler et al (1988); Macdonald & Carroll (2006); Manatos et al (2017); Sutherland-Smith (2010).
31. Richards et al (2016).
32. Bretag et al (2014).
33. Ibid.
34. Morris & Carroll (2016).
35. Macdonald & Carroll (2006).
36. Pekovic et al (2020a).
37. Pekovic et al (2020b).

The total cost of the practice is around 76,000 euros annually (for human resources, iThenticate software, and ongoing promotional and educational activities). The IRAFPA certification process cost about 20,000 EUR, as did the development of the online courses. The total cost seems reasonable given that the practice impacts the entire university culture.

The holistic approach to academic integrity established at the University of Montenegro is transferable to other universities that are determined to incorporate integrity principles create academic integrity cultures. Any university can use the IRAFPA criteria for direction, while adapting the mechanisms, tools and strategies for achieving these goals based on their local context (e.g., size of student population).

COMMENDED PRACTICE: MIND THE GAP: ONLINE TRAINING ON GOOD ACADEMIC RESEARCH PRACTICES (FLEMISH INTERUNIVERSITY COUNCIL)

" *A novel online research integrity training tool aimed at PhD students as well as more experienced researchers.*

Practice Description

The Flemish Interuniversity Council (VLIR) created Mind the GAP (Good Academic Practice), a novel online tool, written in English, to provide academic researchers at all levels with a rigorous but accessible introduction to research integrity.

The tool breaks the training into 4 modules and 2 supplementary sections:

- ► Module 1: Introduction: research integrity in general
- ► Module 2: Supervision and Mentoring
- ► Module 3: Good Academic Practices for: research design and conduct, research data management, reporting results, conflicts of interest, science communication, and research(er) evaluation and assessment
- ► Module 4: Violations of Research Integrity (and what to do when misconduct happens.)
- ► Supplementary: General Data Protection Regulation (GDPR)
- ► Supplementary: Ethics rules and regulations

The tool also provides exercises ('test your mind for GAPs') intended to help the participants understand and practice certain principles.

Users can train their knowledge and skills at their own pace, and reflect on their own points of view, professional behaviour and lab/university culture when it comes to integrity. Mind the GAP is a comprehensive training programme that takes about eight hours to complete. A diversity of pedagogical methods are used in order to achieve real progress for as many users as possible, and the tool is enriched with comics and videos to support the texts.

Problem Addressed by the Practice

The purpose of the tool is to provide education and training on research integrity in an any-time, anywhere modality. The need for asynchronous and online training was stimulated by the COVID-19 pandemic, when all PhD students and researchers shifted to remote work and in-person trainings were cancelled, but it is relevant for the future in which much of higher education work will be hybrid. The goal of the tool is to:

- ► focus participants on good research practices;
- ► give an extensive overview of all aspects of research integrity;
- ► instil an integrity culture;
- ► enable a shared approach at all (Flemish) universities, while allowing for individual institutional differences (e.g., references can link to specific institutional policies);
- ► allow researchers to independently discover integrity practices, at their own pace;

- ▶ provide a common reference point the PhD students and other researchers can return to throughout their career; and,
- ▶ offer the research integrity training that is increasingly required by research funding bodies.

In other words, the Flemish Interuniversity Council was seeking a way to deliver research integrity training both efficiently and consistently across their institutions. The development of this tool addresses many of the efficiency and consistent problems with traditional in-person instruction of research integrity. For example: senior researchers and supervisors do not have the time to provide integrity training; junior researchers need just-in-time training, not just one-time learning opportunities; and, face-to-face training often limit opportunities for active learning because of physical space constraints. In addition, it is important to provide researchers with consistent information about research integrity that transcends institutional boundaries, to create shared understandings of research integrity despite varied cultural backgrounds.

Conceptual Basis

The core of the Mind the GAP practice is the European Code of Conduct for Research Integrity (ALLEA)[38] and its four principles: reliability, honesty, respect, accountability. This European Code of Conduct for Research Integrity serves the European research community as a framework for self-regulation across all scientific and scholarly disciplines and for all research settings. The practice furthermore draws on best practices in online learning, blended learning, and ongoing training by incorporating active exercises and a detailed summative test.

Number of People Reached

The tool is structurally and sustainably embedded in the academic curriculum for PhD students at the five universities that VLIR represents. Since many other research and education institutions have already shown an interest in incorporating the tool in their own learning platforms, the number of people reached will continue to grow.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

The Mind the GAP tool was built from scratch by a dedicated VLIR employee, who worked on it for 16 months, with funding of 87,000 Euros provided the five universities. The Research Integrity Officers of all universities were very closely involved in providing content. The tool was extensively tested and evaluated by cohorts of administrators, academic research staff, teaching personnel, and policy advisors at each of the five universities, as well as by the members of the VLIR Doctoral Schools working group.

The tool was iteratively evaluated for effectiveness throughout development, and a thorough evaluation is planned after one year of implementation. Each of the five universities involved has a dedicated employee who will take charge of the regular evaluations, monitoring feedback and impact.

The tool has been designed so that it can easily be integrated into the different learning platforms of the various universities involved. Because these platforms are also used by other institutions, a licensing agreement is being developed to enable the easy transfer of the tool to the remaining Flemish university colleges and then to any higher education institution around the world.

---

38. https://allea.org/code-of-conduct/

*" An online course to help students become informed
and responsible actors in the digital research world.*

Practice Description

This commended practice is a Privacy in Research online course, which takes about 6 to 9 hours to complete. The broader aim of the course is to help students become informed and responsible researchers in the digital world. Specifically, the course objectives are to help students reflect on their own (future) role as a researcher and to engage with the legal and ethical issues in their field such as how to: apply privacy by design in the research plan; assess risks related to the rights of data subjects and mitigating measures; collaborate in a multi-stakeholder Data Protection Impact Assessment (DPIA); and, reflect on being a responsible researcher or practitioner. The course is designed to fit into existing courses/curricula.

A key component of the course is a role-playing game[39], which enables students to apply the concepts learned in the online training or class lecture and experience multi-stakeholder assessment within real research scenarios. The game includes multiple scenarios, each of which contains multiple stakeholder roles and directions for role-playing the scenarios. To guide the students in playing the game, there are Role Cards, Concept Cards, and the Lecturer Roadmap.

▶ *Role Cards.* For each of the major stakeholders (e.g., researcher, lawyer, and IT expert), there is a Role Card that provides a list of questions tailored to help the player act their role in the game.

▶ *Concept Cards.* These cards help the students become familiar with the most relevant concepts involved in the scenarios, such as data subject rights and data processing.

▶ *Lecturer Roadmap.* This guide walks the instructor through all phases of incorporating the roleplay into their course and then leading the students through the roleplay.

In response to the COVID-19 pandemic, the University transformed the roleplaying game for use in an online setting using Blackboard Collaborate. In addition, the University added two role-plays to highlight the privacy risks posed by research in the online environment and the mitigating measures that could be taken in response. Case 3: Shared Responsibility focuses on a scenario in which personal data are processed within a research project that involves high data protection risks. Case 4: Research Integrity, Data Protection and Open Science in COVID-19 walks participants through the Data Protection Impact Assessment (DPIA) method[40] and reveals resources about risks and data protection. Students can also submit dilemmas from their own field or experiences.

Problem Addressed by the Practice

The role-playing game was created to address four main problems:

▶ research privacy needed to be embraced by researchers themselves, and not left to non-researcher stakeholders like lawyers, security experts and data protection officers;

▶ checks-and-balances already in place, such as responsible conduct of research, need to be strengthened given the threats posed to privacy by things such as technological advances;

▶ requirements for data protection were not perceived as a core research integrity concept but as an administrative burden; and,

▶ connecting issues, expertise and concerns of participants is challenging and cannot be achieved through traditional lecture-type pedagogies.

In addition, with the implementation of the General Data Protection Regulation (GDPR) in 2018, the University determined that researchers needed training on how to securely manage data, conduct multi-stakeholder assessments of risks and responsibilities, and recognise that data privacy is critical at all times, even when there is pressure to quickly introduce new tools or approaches in response to external forces (like the pandemic).

---

39. https://sites.google.com/rug.nl/privacy-in-research/role-playing-game
40. https://www.dataprotection.ie/en/organisations/know-your-obligations/data-protection-impact-assessments

Conceptual Basis

There is a need to integrate principles on responsible conduct of research into policies and research culture, yet there is a gap in the literature on how this can be done[41]. A privacy by design approach (DPIA) helps all stakeholders to articulate the main ethical issues, to apply the key principles of the GDPR and to work together to mitigate risks and develop best practices. Similar to principles and norms in a code of conduct on research integrity, the DPIA method helps to discuss dilemmas.

The DPIA approach relates to the ICAI principles in the following manner. Honesty to acknowledge issues; respect that different disciplines look differently; fairness principles are enshrined in law and made practical; responsibility to use tools in an informed way; trustworthiness that research is responsible and respects integrity and dignity of research subjects; and courage to realise that some problems need to be solved not by individuals but by teams.

Number of People Reached

The Privacy in Research course has been offered to 24 research master students, 60 PhD students, and 90 academic and administrative staff members (e.g., deans, policy developers, privacy experts, data management staff, teaching staff, researcher supervisors, and ethics committee members). Furthermore, the Role-Play Game has been incorporated in other courses and thus reached 120 students. The e-learning material the training has been used by 580 students. Outside the University, the course was offered to disciplinary communities within European Research Infrastructures, DELAD: 40.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

The practice is commended for the wide stakeholder involvement organised through a COMENIUS[42] team and growing community of practice.

The COMENIUS team consisted of:

▶ a COMENIUS SENIOR fellow, who was a lawyer at central legal department with a background in teaching law and information and communications technology (ICT) and member of legal and ethical committee of CLARIN[43];

▶ an educational innovation expert;

▶ a professor of methods for social sciences and member of the central research integrity committee; and,

▶ a professor of responsible research and innovative use of data.

The community of practice, consisting of teaching staff, data managers of research support, and data management support staff (library and Central IT department), developed the relevant scenarios for the roleplay. Experts of Educational Support and Innovation helped structure the community of practice and created the roadmap for teachers. In addition, a couple of postdocs helped with case creation, research and educational directors functioned as ambassadors, and a team of experts on privacy & security in faculties make it possible to embed the practice in a growing number of courses.

The cost of developing the practice was covered by the awarding of a COMENIUS Senior Fellowship grant of 100,000 euro. While the start-up cost may appear high, the ongoing cost is minimal and the practice can now be replicated by other institutions as all materials are freely available under a Creative Commons license.

Although the practice has not undergone a formal efficacy study, ongoing iterative feedback is being used to enhance the effectiveness of the course. Furthermore, the effectiveness of the practice can be demonstrated by an increasing interest in the game by external communities, such as the European CLARIN DELAD community[44].

The materials are versatile and available in open access at the Privacy in Research website[45]. Together with the online available roadmap for teaching staff, the practice can be freely used by researchers throughout Europe and beyond.

---

41. Degn (2020).
42. The COMENIUS programme "contributes to the innovation and improvement of higher education in the Netherlands. See https://www.nro.nl/en/researchprogrammes/comenius-programme for more information.
43. https://www.clarin.eu/faq/what-clarin
44. https://www.clarin.eu/content/privacy-design-research
45. https://sites.google.com/rug.nl/privacy-in-research

” *A safe place for graduate students to discuss research integrity dilemmas and violations.*

Practice Description

The course Research Integrity and Responsible Scholarship provides a safe space for graduate and master students to discuss research integrity dilemmas and violations (ranging from questionable research practices to fraud, fabrication and plagiarism), the Netherlands Code of Conduct for Research Integrity, and other national and European laws and regulations. At the same time, students also learn about guidelines for ethics review, good practices in data collection and storage, proper handling and analysis of data, reliable and verifiable research practices and, open science, impartiality, independence and norms on co-authorship.

The course takes about 84 hours to complete and is divided into four parts: (1) values and responsibility in science; (2) standards for research at the Faculty of Social Sciences at VU Amsterdam; (3) integrity dilemmas in practice; and, (4) data management. Each part is covered by three types of meetings:

- ▶ plenary meetings for instruction and to report on results of small group discussions;
- ▶ breakout sessions in small groups (5 persons) to discuss public values, codes of conduct, and ethics review procedures; and,
- ▶ bilateral meetings to discuss peer feedback on draft research questions, the final essay, and the data management plan.

Students participate in workshops and complete assignments on the code of conduct for academic staff, research data management (RDM), ethical dilemmas and stakeholder relations. Students conclude the course with a short essay about an ethical dilemma that they find relevant.

Problem Addressed by the Practice

Around 2011, social scientists across the globe were shocked by the data fabrication practices of Diederik Stapel[46]. While this particular form of fraud was a rare discovery, it spurred a discussion on questionable research practices and research integrity: how prevalent are they and are we doing enough to prevent them? A few years later, a remarkable case of fraud at VU Amsterdam came to light: Mart Bax, a retired anthropologist, turned out to have fabricated interviews, journal articles and even prizes in the 1990s[47]. So, it seems that despite the existence of codes (like the Netherlands Code of Conduct for Research Integrity), require training to act with integrity and in accordance with such codes.

This course was created to ensure that future social science researchers had knowledge of research integrity, ethics review, and data management. Some key questions addressed in the course include: what are the appropriate procedures to ask for participant consent in social research; when can research be conducted legitimately in the absence of explicit consent; what are the ethical limits to the use of publicly available data; and, what rights do people have with respect to their data, according to Dutch law and European regulations?

The course contributes to a reflection and discussion on the normative consequences of the abstract ideals of science, and an awareness of standards of good conduct and the responsibility of researchers in the social sciences. This course also helps to ensure that the privacy safeguards built into law and regulations.

Conceptual Basis

The course is based on the values that motivate research integrity and responsible scholarship. Participants in the course acquire knowledge and understanding of: 1) the public values embodied in science; 2) the behavioural consequences of these values in daily practice; and, 3) proper scientific behaviour. In the first week, the five principles of good research practice outlined in the Netherlands Code of Conduct for Research Integrity are discussed: honesty, scrupulousness, transparency, independence, and responsibility.

---

46. https://www.apa.org/science/about/psa/2011/12/diederik-stapel
47. https://retractionwatch.com/2013/09/23/dutch-anthropologist-mart-bax-faked-61-papers-says-university/

Number of People Reached

Since 2018, the course has been taken by 60 PhD students in the Graduate School of Social Sciences and 30 students in the 2-year masters Societal Resilience program.

In addition, all documents related to the course are publicly available[48], and in 2020-2021 alone, they were downloaded about 400 times per year.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

The main lecturer of the course collaborated with research data management experts to create the course content. The Faculty Data Steward assesses and provides feedback to the Data Management Plans written by the students, and student input is used to continually improve the course. Finally, the vice dean for research attends course meetings where students present their final papers. By combining academic staff, library staff, faculty, supporting staff, and students in one platform where academic integrity is discussed, the course serves more functions than knowledge transfer. Course discussions have led to improvement of internal regulations and developed guidelines for use of social media in research.

It is difficult to estimate the costs involved in the design of the course because it emerged from a task force on research integrity consisting of volunteer faculty members. Subsequently, the Graduate School for Social Sciences facilitated the integration of the course in the mandatory training programme for PhD students, and they compensate instructors for teaching time. The course was redeveloped for inclusion in the Research Master Societal Resilience, which was financed by the Faculty of Social Sciences. Due to COVID-19 restrictions in 2020, which prohibited on campus teaching, the course was adapted to an online setting. The shift to a remote teaching mode required additional redevelopment hours, and this redevelopment was financed by the Faculty of Social Sciences.

The course seems to be effective. Among PhD students and supervisors, it has increased: the number of applications for full ethics reviews of research projects, awareness of ethics review procedures and data management policies, and knowledge of data management practices. Finally, as a result of the clear and continued demand that course participants expressed in course evaluations for more training in transparency and data management, a new course has been developed in which participants will learn to preregister their research, as well as document data collection and analysis in a study of their choosing[49].

The course, with minor changes to substitute in local guidelines and policies, is fully replicable in other academic institutions because all materials for this course are publicly available[50].

---

48. https://renebekkers.wordpress.com/teaching/
49. The materials for this new course can be found at https://osf.io/bh3yp/
50. https://renebekkers.files.wordpress.com/2021/05/research-integrity-and-responsible-scholarship-2021.pdf

A research integrity course to foster the knowledge and skills PhD students need to tackle integrity dilemmas.

Practice Description

This 60-hour VIRT2UE PhD research integrity course follows a blended learning approach and has five components:

Component 1: Preparatory Assignments

The students complete three short interactive eLearning modules to prepare for future assignments and in-class activities:

1. Introduction to Research Integrity[51]
   a. introduces the concept of research integrity and describes the range of research practices from responsible, through questionable, to misconduct.
   b. examines the responsibility of the individual researcher, as well as the influence of research culture and the wider scientific system.
   c. overviews principles and recommendations from the European Code of Conduct on Research Integrity (the primary guidance document on research integrity for academic institutions in Europe)
2. Introduction of Virtue Ethics to Research Integrity[52]
   a. introduces the relevance of virtue ethics to research integrity.
   b. provides direct instruction on core virtue concepts and terms
3. Virtue Ethics under Current Research Conditions[53]
   a. addresses more systemic issues, like performative pressures in research
   b. relates issues to virtue ethics and the individual experience of the researcher.

Component 2: In-person Class (Day 1)

Participants are guided through a series of structured dialogical exercises (such as a modified dilemma game, varieties of goodness exercises, lectures, and small group work). The purpose of these exercises is to foster reflection on scientific virtues and promote understanding of the European Code of Conduct for Research Integrity.

Component 3: Intermediary Assignments

Students watch a video about the institution's confidential counsellor[54] and read through several resources (e.g., Open Science, registered reports, open peer review, open access publishing and open data). Then, the students engage in a group assignment in which they write a 1200-1500 word report describing the development of a chosen aspect of open science, its current status (i.e., to what scale is it being implemented?), its benefits and challenges, and their recommendations and conclusions. Students are also asked to prepare a 10-minute presentation on their report, which they will give during Component 4.

Component 4: In-person Class (Day 2)

During the second day of the in-person classroom experience, participants hear a couple of plenaries, give their group presentations and engage in some small group work on a case study.

Component 5: Final Assignments

For their final assignments, students meet with their supervisor to talk about research integrity and submit a one-page summary of the discussion. The students then complete a self-reflection on what they learned and, after watching a video about research culture[55], they write a ~1500 word report on the research culture that they have experienced and/or created.

---

51. https://embassy.science/wiki/Instruction:6ceba4e4-fb32-4953-9138-5436807fcde6
52. https://embassy.science/wiki/Instruction:86f47366-a189-4395-9301-36ddb6d1fc68
53. https://embassy.science/wiki/Instruction:43c900ea-a317-4528-8ece-1f3fb3564867
54. https://www.youtube.com/watch?v=zu21lFpDS7U&feature=youtu.be
55. https://www.youtube.com/watch?v=nWyg7F01fEo

Problem Addressed by the Practice

Research integrity issues have become more prominent in The Netherlands[56] and worldwide, which specifically impacts PhD students since they generally lack the knowledge and skills needed to tackle these issues. This practice fosters such knowledge and skills and by stimulating conversations between PhD students and their supervisors, post docs and tenured staff.

Conceptual Basis

The content of the course is rooted in the concept of virtue ethics. Virtue ethics maintains that a virtuous researcher requires both an awareness of general rules and principles as well as how to apply them in practical situations. Strategies to foster such awareness must include direct instruction on core virtue concepts and terms[57] and the application of knowledge through reflection on one's own character virtues, particularly in relation to specific morally ambiguous situations[58]. Following an Aristotelian approach to moral learning, these reflections should focus on concrete personal experiences[59]. So, the pedagogical approach of the course is rooted in the concept of experiential learning, which posits that theoretical knowledge must be consolidated through actions and reflection to form real knowledge and practical wisdom[60]. The interactive and participatory design of the VIRT2UE programme's core online and offline exercises reflects this 'learning by doing' approach, which is most particularly reflected in the programme's participatory exercises that are dialogical in nature and enable participants to develop knowledge through group learning processes[61].

The principles of the European Code of Conduct - Reliability, Respect, Honesty, Accountability - are reflected throughout the eLearning modules and the participatory exercises. Furthermore, PhD students are asked to reflect on the virtues can guide them in morally challenging research situations.

Number of People Reached

The VIRT2UE program is obligatory for all PhD students at the AmsterdamUMC – location VUmc, so approximately 200 PhD students complete the course per year.

Stakeholder Involvement, Efficiency, Effectiveness & Replicability

The VIRT2UE PhD course is based in the VIRT2UE programme, developed as part of the H2020 funded VIRT2UE project[62] for teaching research integrity from a virtue ethics perspective. The consortium that developed the programme involved many teachers, students and the research integrity counsellor.

The course costs 550 euros per PhD student.

While the VIRT2UE approach has not yet been officially evaluated for effectiveness, the participatory exercises were adapted from an existing course that underwent a multi-year evaluation of 247 students. That evaluation demonstrates that students identify with the dilemmas (60%) and that the course exercises increased awareness of research issues (75%).

The programme is very flexible and can be implemented in all disciplines and can be adapted to specific contexts, incorporating country and institution specific information and codes. Due to the VIRT2UE train-the-trainer programme, the VIRT2UE approach is now being implemented in various universities in Europe, including the research integrity trainings of: MEFST, Croatia; Acibadem Universisty, Turkey; and the University of Reading, UK.

---

56. Crocker & Cooper (2011).
57. Baehr, J. (2013); Berkowitz & Bier (2007).
58. Baehr (2013).
59. Aristotle (1889); Stolper et al (2015).
60. Widdershoven & Molewijk (2010).
61. Stolper et al (2015).
62. Evans et al (2021).

BRIEF SUMMARIES OF OTHER RELEVANT APPLICATIONS

The following section provides examples of other relevant practices that were submitted in response to the 2021 CoE Best Practice Programme in Promoting Academic Integrity. These practices are briefly described in alphabetical order by the name of the institution.

ADA University (Azerbaijan) is noted for initiating new approaches to ensure academic integrity in remote instruction during the COVID-19 pandemic. The faculty proposed adjustments to existing policies, asked the University to provide appropriate technological and pedagogical tools, and revised online exam policies. For example, a Forgiveness Policy was added to the Honour Code (to which both students and faculty publicly pledge not to lie, cheat, plagiarise or discriminate, or help others who violate these principles) to reduce the punishment when a freshman in their first semester commits an integrity violation. As another example, the University adopted Respondus Lockdown and Monitor, and incorporated many other useful LMS prevention techniques, to protect assessment integrity.

Andrássy University Budapest (Hungary) is noted for its creation of The Language and Spelling Check Service to support students, whose first language is not German. In a 30-minute feedback discussion with a proof-reader, the student learns about errors in their writing. The aim is not to simply correct papers, but to review sections of draft text so that students learn about standards for writing with integrity. The ICAI values were integrated into the programme in several ways: honesty (errors in the text or passages that would constitute an academic breach are directly named and addressed by the proof-readers); fairness (proof-readers work objectively, without deviating from a set principle in their work and without anyone being favoured or disfavoured); responsibility (if plagiarism or any academic breach is found, students will be held accountable for it); trustworthiness (the programme places great importance on the selection of the proof-readers to ensure that they are able to provide the best possible support to students); and courage (the proof-readers communicate to the responsible person if they find academic breaches by the students).

Carinthia University of Applied Sciences (Austria) is noted for its creation of "Understanding legal aspects in education: A guide for teaching staff and students" in response to the emergency remote instruction required as a result of the COVID-19 pandemic. Remote instruction placed a huge spotlight on the legal aspects in education, especially in terms of online instruction and the implementation of digital tools, and it was determined that staff needed support regarding legal aspects in (digital) education. So, the University organised several online workshops (on topics such as copyright law, plagiarism, Data Privacy Law, screen management), provided recommendations for administering online exams (aiming to protect student privacy), and created a team ("AG Online") consisting of experts from all schools and essential service departments (e.g., the Legal Department, the Chief Digital Office and the Centre for Teaching and Learning) to discuss and solve common challenges such as how to proctor online exams.

Catholic University of Croatia (Croatia) is noted for its efforts to reduce plagiarism in final assessments. Their antiplagiarism procedure is part of the University's policy of academic integrity promotion, aiming to help students embed academic integrity values (honesty, trust, fairness, respect, responsibility and courage) in their graduate theses. Students can submit their graduate thesis to the antiplagiarism procedure, where the entire thesis is checked for plagiarism. After the analysis, the student can work on the thesis and make corrections, meaning this practice has a formative element. After the corrections, another analysis is performed, and the process is repeated until plagiarism is (hopefully) no longer an issue.

As a final check prior to publishing, each thesis is evaluated by the mentor and the department's scientific board and, if necessary, sent to the department's ethical committee for further evaluation. If there are serious ethical and research integrity concerns, the thesis is forwarded to the University research ethics committee (REC) to ensure the quality and integrity of all cumulative work submitted for degree conferral.

Catholic University of the Sacred Heart (Italy) is noted for its Inclusion Service (Services for the inclusion of students with disabilities) which provides specific guidelines to the entire faculty to ensure that they foster fairness and integrity to students with special needs during exams. During the COVID-19 pandemic, the Service recognised the necessity to introduce measures so that inclusion and integrity continued to be present in exams administered online. Policies, procedures and tools were updated to allow students to use new digital tools for accessibility, provide new technological support spaces for teachers, and implement new digital tools to guarantee the integrity of exams.

Humanitas University (Poland) is noted for establishing its Academic Legal Clinic to help students and scientists by providing professional legal assistance in cases related to academic dishonesty, such as: plagiarism and other violations of intellectual property rights, falsification of scientific research, examination fraud, etc. This assistance consists in editing pleadings, providing legal advice, representing victims in courts and before law enforcement authorities. In addition, the Clinic conducts educational activities aimed at making students and scientists aware of the dangers of scientific dishonesty, discussing the types of scientific dishonesty, their consequences (legal, disciplinary, social) and the negative impact on the quality of science and teaching. As part of its scientific activity, the Clinic organises meetings, lectures, thematic sessions and gives media interviews on topics related to pathologies in science, scientific dishonesty, and violations of the rights of students and scientists.

International Vision University (North Macedonia) is noted for its development of a Sustainable Academic Integrity Policy applicable to all students and academics. The intent of the Policy is to convey the seriousness of academic integrity violations, help create a compelling environment that will encourage and motivate both professors and students to develop and uphold core ethical values (e.g., honesty, respect, fairness, competence, leadership, responsibility, caring, courage, altruism, and compassion), and to ensure that students and staff from diverse backgrounds come to a shared understanding of academic integrity. The University also launched educational projects to enhance academic integrity for teachers, students and others through meetings, webinars, and academic integrity training. Those who have violated academic integrity also participate in these projects with the goal of helping them become more engaged learners who act proactively towards academic integrity.

The **London School of Commerce (Malta)** is noted for introducing an institutional and strategic approach to safeguarding academic integrity during remote instruction. They designed and implemented an innovative academic process that engages multiple stakeholders and enhances communication procedures to ensure continuity of student learning experience while maintaining high integrity standards and educational quality in accordance with the policies and regulations set by national education authorities. The School implemented: 1) mini-zoom inductions to ensure students can use the online learning tools; 2) online academic integrity promotions; 3) 'virtual zoom counters' and 'all enquiries' to support students; 4) a new Zoom Administrator role to support online class delivery and underpin academic integrity; 5) enhanced guidance on avoiding plagiarism and academic misconduct via the LSC student portal; 6) use of Turnitin for checking and submitting assignments; and, 7) a global online Teaching Observation Scheme to provide feedback on the quality of the teaching in support of academic integrity. The new practices widened awareness and understanding of the central importance of managing academic integrity and its connection to student learning and the institution's mission.

"Nicolae Balcescu" Land Forces Academy (Romania) is noted for its establishment of the Department of Intellectual Property and Academic Integrity (DIPAI) and the implementation of its Standard Operating Procedures (SOPs). The DIPAI and SOPs were implemented to address the concern that plagiarism was common in the theses of undergraduate and graduate students, but also in the scholarly publications of teachers and research personnel. The DIPAI performed an analysis and determined that there were two main causes of the integrity violations: 1) insufficient knowledge of how to cite; and, 2) improper management of the process to verify the integrity of these scholarly works. The establishment of the DIPAI and especially its SOPs resulted in a significant decrease in plagiarism, a high acceptability of DIPAI's responsibility to advise academic members, and easier access to Open Source scientific literature and other scientific databases.

Polis University (Albania) is noted for acknowledging the pressures and temptations that might lead PhD students to commit academic misconduct, and then structuring its Research Methods course to reduce the occurrence of academic misconduct. As the University pointed out there are two aspects to addressing the problem of academic misconduct: how to practically monitor the originality, novelty, and transparency of the research, and mitigate the breach or malpractice of academic integrity; and second, how to organise and structure a research methods class in such a way as to help students produce original, novel and transparent research. The University tackled the former by implementing the use of anti-plagiarism software to improve a student's writing in dialogue with the course instructor, and the latter by scaffolding research skills and closely working with the students throughout the course.

The **University of National and World Economy (Bulgaria)** is noted for its creation of "Online Exam Without Plagiarism", an online university teaching practice designed to stimulate changes in student behaviour and culture by raising their awareness of academic integrity and increasing their motivation to uphold integrity. The traditional final exam (writing a paper or taking a test) was replaced by an assignment in which students had to prepare and present a video textbook on a chosen topic from the course. This change encouraged students to be innovative and to acquire new digital skills and competencies, instead of copying text from the internet and pasting it into exam papers (i.e., plagiarising). In addition, the project reinforced academic integrity values like responsibility and honesty (since their work would be more public than a traditional exam or paper), respect (for issues like copyright and intellectual property), and fairness (because there was the establishment of clear performance targets and ongoing and transparent feedback throughout the process).

The **University of Zadar (Croatia)** is noted for its efforts to continuously work on preventing cheating, plagiarism and academic dishonesty through cultivating an integrity culture. In response to the COVID-19 pandemic, the University made additional efforts to raise awareness and develop and strengthen academic integrity in response to the increased temptations and opportunities to cheat in the online assessment environment. Continuous communication reminded stakeholders, both teachers and students, that academic integrity must be strictly respected. They offered online workshops such as "Academic Integrity for Students" (focusing on the fundamentals for students) and "Academic integrity in the context of the teacher-student relationship" (focusing on teachers and how they should communicate with students). Care was taken to ensure that the workshops were rooted in the International Center for Academic Integrity's (ICAI's) fundamental values: honesty, trust, fairness, respect, and responsibility, plus the courage to act on them even in the face of adversity.

SUMMARY: LESSONS LEARNED

The winning best practice, the Dilemma Game by Erasmus University (Netherlands), the 9 commended practices, and the other 12 relevant applicants demonstrate that European universities are significantly committed to promoting academic integrity among their students, researchers, and staff. Their efforts should serve as an inspiration to higher education institutions around the world that would like to do more to support and promote academic integrity cultures.

In this summary, five lessons for building academic integrity cultures, gleaned from the applicants, are described: 1) embrace innovation to adapt to changing contexts; 2) teach academic integrity as a skillset; 3) imbue academic integrity practices with values; 4) engage the entire university community; and 5) build culture one step at a time.

Embrace Innovation to Adapt to Changing Contexts

The institutions described in this compendium demonstrated great adaptability and innovation when faced with an emergent need to shift from in-person to remote instruction at the start of the COVID-19 pandemic. The pandemic not only changed the stressors and pressures that might lead to academic misconduct, but it necessitated the move of integrity training and services to the online or virtual environment. For example, while Erasmus University (Netherlands) decided to digitise the Dilemma Game before the pandemic, it proved to be fortuitous. Turning a hard copy game into an app, made it more accessible (i.e., it could be played by anyone, anywhere), more adaptable to new situations (i.e., dilemmas could be easily added), and more relevant (i.e., dilemmas could be filtered to appeal directly to individual participants). The Mind the GAP online learning tool, created by the Flemish Interuniversity Council, enabled researchers and students from multiple universities to train together and create a shared understanding of normative research integrity practices that could withstand the temptations that can arise in the context of remote research work. The Catholic University of the Sacred Heart (Italy) adapted its Inclusion Service to ensure that academic integrity was maintained in online exams while still properly serving students with disabilities. ADA University (Azerbaijan) quickly adapted its Honour Code with a forgiveness policy to enable freshmen to make an error in ethical judgement without significant repercussions. In these examples, we can see that to build and maintain academic integrity cultures, institutions must notice new forces that threaten to undermine integrity and then adapt or innovate to address those forces.

Teach Academic Integrity as a Skillset

The Best Practice Programme applicants demonstrate a tremendous recognition that the academic integrity is a skill that can be learned, over time and in response to well-designed and interactive learning experiences. In other words, integrity is not something that a person has or does not have, but is something that can be developed and nurtured within the right environment and with the right instruction. So many of the practices described in this compendium can be applauded for their initiatives to deliver such training to their undergraduates, graduate students and career researchers. The Dilemma Game, Mind the GAP, Embassy of Good Science and VIRT2UE (Amsterdam UMC, VU University Amsterdam), and Privacy in Research (University of Groningen, Netherlands) all use real-life dilemmas, cases and/or scenarios to actively engage participants in thinking through and solving research integrity challenges. These practices highlight that there are techniques and steps that one can take to solve even the most pressing integrity problem, and students and researchers need only to be taught them and be given opportunities to practice the skill. The University of Zadar (Croatia), the University of Montenegro (Montenegro), and Andrassy University Budapest (Hungary) remind us that associated skillsets (like paraphrasing, critical reading, citing) must also be developed to provide foundational support for academic integrity behaviours. After all, if students and researchers do not have the skills for integrity, it is unreasonable to expect them to be able to consciously choose integrity over misconduct.

Imbue Academic Integrity Practices with Values

The critical role played by values in academic integrity is exemplified by the applicants described in this compendium. Integrity, after all, is an aspirational skill, difficult to achieve given the multiple competing interests and forces that are more likely to encourage misconduct. Rooting policies, procedures and training in values is one way to help higher education community members align their personal and professional values with shared institutional values to bolster their motivation to choose integrous behaviours over misconduct. There is no one right source for such shared integrity values. The Dilemma Game and the Research Integrity & Responsible Scholarship practices were rooted in the values found in the Netherlands Code of Conduct for Research Integrity: honesty, scrupulousness, transparency, independence and responsibility. CO:RE (University of Oslo, Norway), Mind the GAP, and VIRT2UE all built their practices on the values inherent in the Allea European Code of Conduct for Research Integrity: reliability, honesty, respect, and accountability. And the Education Quality Assurance Department (Lesya Ukrainka Volyn National University, Ukraine) and Privacy in Research practices both utilised the International Center for Academic Integrity's fundamental values for their conceptual frameworks: honesty, fairness, respect, responsibility, trustworthiness, and courage. Choosing or establishing a shared ethical values framework is imperative for building academic integrity cultures because they inform and reinforce desired normative behaviours and provide guidance for making behavioural choices.

Engage the Entire University Community

Building an integrity culture requires the entire community – from students to administrators – to get involved. So many of the applicants to the Best Practice Programme recognised the benefits of far-reaching engagement across their institutions. Yet, the ways in which each applicant accomplished this were unique and institutionally contextualized, reminding us that shared principles for building academic integrity cultures need not be manifested in the same way. For example, Erasmus University garnered wide stakeholder involvement in the creation of the Dilemma Game, which is laudable by itself, but it is the extensive stakeholder involvement in playing the game continues to build the academic integrity culture they seek because they openly discuss dilemmas and collaboratively apply shared values and standards to resolve them, thereby creating and shaping behavioural norms. At the University of Montenegro and the Lesya Ukrainka Volyn National University, a holistic approach to developing their integrity cultures involved stakeholders from throughout the university to build everything from policies and procedures, to preventative education activities. Amsterdam UMC, VU University Amsterdam and the Flemish Interuniversity Council sought not only to engage a single university community in building an integrity culture, but to engage multiple researchers from many different institutions to create a shared research integrity culture. They did this by creating a shared common platform for open discussion and co-learning (the Embassy of Good Science) and developing an online training tool (Mind the GAP), both of which sought to establish shared values and understandings of responsible conduct of research across Europe and beyond. All of these practices remind us that with the transnational nature of research and academic study in the twenty-first century, our efforts to build integrity cultures should extend beyond our own backyard and into the global community of researchers and learners.

Build Culture One Step at a Time

It is clear from the practices illustrated in this compendium that higher education institutions can take small steps towards building cultures of integrity, dependent on the resources (i.e., time, money and people) they have available to them at that particular moment. In other words, the Best Practice Programme applicants demonstrate that institutions should not wait to start building integrity cultures but instead should gather like-minded individuals and integrity allies to make small progress towards that audacious and long-term goal. The University of Oslo offers one such example in their organisation of webinars to raise awareness of research integrity issues. Organising webinars is something any higher education institution can do. Creating a theme around the webinars and communicating that theme across a campus can open minds, which is a good first step to changing behaviours. The Department of Social Human Sciences (Technical University of Moldova), Polis University (Albania), and the University of Zadar all demonstrated the importance of simply updating or creating courses or workshops to enhance the focus of students on the importance of ethics and integrity. The University of Montenegro and the Lesya Ukrainka Volyn National University remind us of the important steps of creating or updating academic integrity policies and procedures, which serve as a necessary structural foundation on which an integrity culture can be built. So, while both the University of Montenegro and the Lesya Ukrainka Volyn National University took a holistic, comprehensive, multi-year approach to culture creation, they and the other applicants showcase that even the smallest step will take universities one step closer to the integrity culture needed to combat academic misconduct and corruption.

CONCLUSIONS

Integrity matters. Even the smallest amount of academic misconduct, if left unchecked and unaddressed, can metastasise and corrupt the higher education institution.

The recently adopted CoE recommendation on countering education fraud and the promotion of ethics, transparency and integrity in education recommends that the member States:

- ► promote quality education by eliminating education fraud;

- ► protect pupils, students, researchers, and staff at all levels of education from organisations and individuals engaged in selling (and advertising) fraudulent services;

- ► provide support for the implementation of preventative and protective measures, as well as a culture of equality of opportunity at all levels and in all sectors of education and training and in the transition between these sectors;

- ► monitor technological developments that could support new forms of fraud;

- ► facilitate international cooperation in the field;

- ► support wide dissemination of the recommendation.

Given that misconduct is shaped by multiple forces at the individual, organisational and societal levels[63], creating a culture of integrity is the best option for making misconduct the exception and integrity the norm.

The higher education institutions featured in this compendium exemplify best practices for such culture creation, from designing and executing innovative training programmes, to the implementation of structural (academic integrity officers and offices), procedural (academic integrity policies and standards), and communication (academic integrity campaigns and workshops) mechanisms throughout the entire institution. Readers can take one idea or several ideas from this compendium, explore them and then adapt them for implementation within their own institutions. It is the hope of the Council of Europe that the 2021 Best Practice Programme in Promoting Academic Integrity inspires the implementation of best practices across Europe and beyond, and looks forward to inviting applications to the Programme again in the future.

---

63. Bertram Gallant (2011).

APPENDIX A –
2021 APPLICATION FORM

Part I: APPLICANT	
Representative ▶	
Title/Position ▶	
Name of Institution/Student Union ▶	
Email Address ▶	
BEST PRACTICE DETAILS	
Title ▶	
Institution ▶	
Country ▶	
Language(s) ▶	
Website (if available) ▶	
CATEGORY OF BEST PRACTICE (if your application falls into several categories, please pick ONE category that best suits)	
Teaching & Learning ▶	☐
Policy ▶	☐
Procedures ▶	☐
Communication ▶	☐
Governance/Structures ▶	☐
Training ▶	☐
TARGET GROUP(S)	
Teaching/Academic Staff ▶	☐
Administrative Staff ▶	☐
Students ▶	☐
Other (Please specify) ▶	☐

IMPLEMENTATION LEVEL	
Institutional ▶	☐
Individual Faculties/Programmes (e.g., biological sciences) ▶	☐
Individual Classrooms ▶	☐
Other (Please specify) ▶	☐

Part II: THE PRACTICE

Practice Description – Short

Provide a one sentence description/summary of the practice ▼

Practice Description-Long (max 250 words)

Summarise the practice. Make sure to address what it is, its key activities/components, what problem/issue/ challenge it addresses, and what population it impacts. ▼

Problem Explanation (max 500 words)

What was the problem/issue/challenge that existed before the practice was implemented? What is known to have caused the problem, how did the problem impact the higher education community, and who in the higher education community did it impact? ▼

Conceptual Basis (max 500 words)

What research or theoretical frameworks were considered in creating this practice? How have the ICAI values (honesty, fairness, respect, responsibility, trustworthiness and courage) been integrated into the practice? ▼

Main Activities (max 500 words)

Briefly describe main activities of the practice, referring to timelines if applicable. ▼

Number of People Reached by the Practice

If available, provide a percentage of the total target population. ▼

Stakeholder Involvement (max 250 words)

Indicate the institutional roles (e.g. librarian, student, instructor) of those involved in designing and implementing the practice. Describe briefly how each role contributed to the best practice. ▼

Cost of Practice

Provide the approximate cost for implementing the practice. Indicate the source of the funds. ▼

Initial Impact and Evaluation (max 500 words)

Indicate initial impact of the practice – what changes resulted and for whom? Describe how the practice/results/impact are evaluated, if applicable. If any evaluation results are available, summarise them and/or provide references if published results are available. If applicable, attach any documents/links supporting the outcome and effectiveness of the practice. ▼

Replicability (max 250 words)

Briefly describe if/how this practice can be implemented in another context (other country or higher education institution) ▼

BIBLIOGRAPHY

Aristotle (1889). *The Nicomachean ethics of Aristotle*. George Bell and Sons, London

Baehr, J. (2013). Educating for intellectual virtues: From theory to practice. *Journal of Philosophy of Education, 47(2)*, 248-262

Berkowitz, M. & Bier, M. (2007). What Works in Character Education. *Journal of Research in Character Education, 5(1)*, pp. 29– 48

Bertram Gallant, T. (2011). *Creating the ethical academy: A systems approach to understanding misconduct and empowering change in higher education*. Routledge.

Bertram Gallant, T. & Drinan, P. (2008). Toward a model of academic integrity institutionalization: Informing practice in postsecondary education. T*he Canadian Journal of Higher Education, 38(2)*, 25-43

Bretag, T., Mahmud, S., Wallace, M., Walker, R., McGowan, U., East, J., Green, M., Partridge, L., & James, C. (2014). Teach us how to do it properly!' An Australian Academic Integrity Student Survey. *Studies in Higher Education, 39(7)*, 1150–1169

Crocker, J., & Cooper, L. (2011). Editorial: Addressing scientific fraud. *Science, 334*, 1182.

doi:10.1126/science.1216775.

Davis, S. F., Drinan, P. F. & Bertram Gallant, T. (2009). *Cheating in school: what we know and what we can do*. Wiley-Blackwell

Degn, L. (2020) Integrating Integrity: The Organizational Translation of Policies on Research Integrity. *Sci Eng Ethics 26*, 3167–3182. https://doi.org/10.1007/s11948-020-00262-w

Eckstein, M.A. (2003). *Combating academic fraud: Towards a culture of integrity*. International Institute for Educational Planning, p. 73. https://unesdoc.unesco.org/ark:/48223/pf0000133038

Evans, N., Marusic, A., Foeger, N., Lofstrom, E., van Hoof, M., Vrijhoef-Welten, S., Inguaggiato, G., Dierickx, K., Bouter, L. & Widdershoven, G. (2021). Virtue-based ethics and integrity of research: train-the-trainer programme for upholding the principles and practices of the European Code of Conduct for Research Integrity (VIRT2UE). *Research Ideas and Outcomes, 7*: e68258. https://doi.org/10.3897/rio.7.e68258

Grasse, K.M., Melcer, E.F., Kreminski, M., Junius, N., Ryan, J., & Wardrip-Fruin, N. (2022). Academical: A Choice-Based Interactive Storytelling Game for Enhancing Moral Reasoning, Knowledge, and Attitudes in Responsible Conduct of Research. In: Bostan, B. (eds) *Games and Narrative: Theory and Practice. International Series on Computer Entertainment and Media Technology*. Springer, Cham. https://doi.org/10.1007/978-3-030-81538-7_12

Guerrero-Dib, J.G., Portales, L. & Heredia-Escorza, Y. (2020). Impact of academic integrity on workplace ethical behaviour. *Int J Educ Integr*, 1*6(2)*. https://doi.org/10.1007/s40979-020-0051-3

Harding, T. S., Passow, H. J., Carpenter, D. D., & Finelli, C. J. (2004). An examination of the relationship between academic dishonesty and professional behavior. *Antennas Propagation Magazine, IEEE 46*. https://doi.org/10.1109/MAP.2004.1388860

Hiatt, J. (2006). ADKAR: A model for Change in Business. *Government, and Our Community*.

Janke, S. et al. (2021). Cheating in the wake of COVID-19: How dangerous is ad-hoc online testing for academic integrity? *Computers and Education Open, 2*. https://doi.org/10.1016/j.caeo.2021.100055.

Kalichman, M. W. (2007). Responding to Challenges in Educating for the Responsible Conduct of Research, *Academic Medicine, 82(9)*, 870-875. https://doi:10.1097/ACM.0b013e31812f77fe

Kibler, W. L., Nuss, E. M., Paterson, B. G. & Pavela, G. (1988). *Academic Integrity and Student Development: Legal Issues and Policy Perspectives*. Asheville, NC: College Administration Publications

Macdonald, R. & Carroll, J. (2006). Plagiarism—a complex issue requiring a holistic institutional approach. *Assessment & Evaluation in Higher Education, 31(2)*, 233-245

Manatos, M. J., Sarrico, C. S. & Rosa, M. J. (2017). The European standards and guidelines for internal quality assurance: An integrative approach to quality management in higher education? *The TQM Journal, 29(2)*, 342–356

Michalek AM, Hutson AD, Wicher CP, Trump DL (2010) The Costs and Underappreciated Consequences of Research Misconduct: A Case Study. *PLoS Med 7(8)*: e1000318. https://doi.org/10.1371/journal.pmed.1000318

Morris, E.J. & Carroll, J. (2016). Developing a sustainable holistic institutional approach: Dealing with realities "on the ground" when implementing an academic integrity policy. In: Bretag, T. (Ed), *Handbook of Academic Integrity*, pp 449–462. Springer.

Newton, P.M. (2018). How common is commercial contract cheating in higher education and is it increasing? A systematic review. F*rontiers in Education: Assessment, Testing & Applied Measurement, 30 August*. https://doi.org/10.3389/feduc.2018.00067

Pekovic, S., Vukcevic, J., Vuckovic, D., Djokovic, R. and Blecic, M. (2020a). What drives students' intention to plagiarise in Montenegro: the moderating role of text matching software. In: Khan, Z.R., Hill, C. and Foltynek, C. (Eds.), *Integrity in education for Future Happiness* (pp.127-154). Brno: Mendel University Press.

Pekovic, S., Janinovic, J. and Vuckovic, D. and Djokovic, R. (2020b). Tools for preventing academic dishonesty: The role of e-learning tutorial for academic integrity. *12th International Conference on Education and New Learning Technologies, EDULEARN20 Proceedings*, doi:10.21125/edulearn.2020.1270.

Richards, D., Saddiqui, S., White, F., McGuigan, N. & Homewood, J. (2016). A theory of change for student-led academic integrity. *Quality in Higher Education, 22(30)*, 242–259.

Stolper, M., Molewijk, B. & Widdershoven, G. (2015). Learning by doing. Training health care professionals to become facilitator of moral case deliberation. In *HEC forum (Vol. 27, No. 1, pp. 47-59)*. Springer.

Sutherland-Smith, W. (2010). Retribution, deterrence and reform: The dilemmas of plagiarism management in universities. *Journal of Higher Education Policy and Management, 32(1)*, 5–16

Orosz, G., Tóth-Király, I., Bőthe, B., Paskuj, B., Berkics, M., Fülöp, M., & Roland-Lévy, C. (2018) Linking cheating in school and corruption. *Revue Européenne de Psychologie Appliquée 68(2):89–97*. https://doi.org/10.1016/j.erap.2018.02.001

Vučković, D., Peković, S., Blečić, M. *et al. (2020)*. Attitudes towards cheating behavior during assessing students′ performance: student and teacher perspectives. *Int J Educ Integr*, *16(13)*. https://doi.org/10.1007/s40979-020-00065-3

Widdershoven, G.A.M. & Molewijk, A.C. (2010). Philosophical Foundations of Clinical Ethics: A Hermeneutic Perspective. In J. Schildmann, J. Gordon, & J. Vollmann (Eds), *Clinical Ethics Consultation. Theories and Methods, Implementation, Evaluation*, p. 37-51. Ashgate.

Xie, Y., Wang, K. & Kong, Y. (2021). Prevalence of Research Misconduct and Questionable Research Practices: A Systematic Review and Meta-Analysis. *Sci Eng Ethics, 27(41)*. https://doi.org/10.1007/s11948-021-00314-9

ENG

www.coe.int

The Council of Europe is the continent's leading
human rights organisation. It comprises 46 member states,
including all members of the European Union.
All Council of Europe member states have signed up to
the European Convention on Human Rights, a treaty designed
to protect human rights, democracy and the rule of law.
The European Court of Human Rights oversees
the implementation of the Convention in the member states.

COUNCIL OF EUROPE

CONSEIL DE L'EUROPE